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Sanatorium Care*

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For many centuries people afflicted with tuberculosis have been advised to change climate and environment. In early days, they were advised to go to the sea shore or some high mountain area.

In this country, Dr. Edward Livingston Trudeau[1] became aware that he was afflicted with tuberculosis of the lungs in 1872 and he went to the Adirondack Mountains for a cure. A person afflicted with tuberculosis this day and time probably would never have been able to endure the hardships Dr. Trudeau went through. He opened and operated the "Adirondack Cottage Sanatorium in 1884 at Saranac Lake, New York."

From this beginning the modern Sanatoria in America got their start. Fresh air was the all-important factor in the cure in the days of Trudeau, with rest and nourishing diet secondary. Along the first decade of the new century, forced feeding, especially raw eggs and milk, seemed to be more important than rest and fresh air. Since about 1920, when artificial pneumothorax came into common usage in the Sanatoria, rest became the most important factor in the cure.

The function of a State Sanatorium is to admit patients who are in need of hospitalization because of tuberculosis. Since the institution is tax-maintained it is desirable to care for those people who can be benefited quickly and returned to their homes so there is a constant turnover with as little waste of time as possible. For years the sanatorium has been able to care for slightly more than half the number of patients applying; therefore, some selection of patients to be hospitalized is mandatory if the best results for patients and state are to be had.

The purposes of the sanatorium are threefold; curative, educational and isolation. There is a form for application of a patient to the Sanatorium which has on one side questions to be answered by the patient and on the reverse side physical examination by a doctor showing that the patient has tuberculosis of the lungs and to what degree. Below this is a space for the county commissioner or judge to sign showing the person is a bona fide resident or citizen of the state and that their financial status is such that they are or are not able to pay for their maintenance ($10.00 per week). This application, when properly completed, is mailed to the Superintendent of either the Clinton or Talihina State Sanatorium, and in most cases as has been necessary many years, the name is placed on a waiting list and the patient called when a bed becomes vacant, in their turn on this waiting list.

When a person is called into the Sanatorium a history is made immediately on entrance. This history records the usual information required of such histories except detailed questioning as to duration of disease, source of infection and probable number of contacts made since the disease has been known to exist, especially the immediate family. The patient is then told to always expectorate in a sputum cup, never to cough without covering mouth and nose with tissue papers provided for that purpose. They are told about rest hours, advised about rules governing patients and assigned to a bed, usually in the hospital, a building for non-ambulatory patients. The temperature,

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pulse, and other bedside information is recorded on a chart at various intervals. The ward doctor, one of the resident physicians, makes at least two visits daily. X-Ray, laboratory and physical examinations are obtained and the first Saturday after admission of the patient (unless in exceptional cases) a staff conference is held. All available information is gone into, a diagnosis is made, and the patient is called before this conference to be told the opinion of the staff. Many times they are shown the X-Ray to impress on them the truth and seriousness of the diagnosis. They are then advised what the treatment is to be. Always rest in bed and many times some form of collapse of the lung or lungs. They are also told the prognosis as nearly as is humanly possible to tell them. A tuberculous person has a much better chance if the facts are told them in the beginning. It is difficult to get any reasonable cooperation from a person who does not know the truth of his condition. Tuberculosis is a very ruthless disease to the uninformed and the person who is afraid to face the facts.

After this consultation, the patient starts the routine which in most cases is complete bed rest with probably artificial pneumothorax, although over one-third of the patients admitted cannot take any form of collapse because of their advanced stage.

The stages of tuberculosis are classified as; 1. Primary infection (childhood) 2.Minimal. 3. Moderately Advanced. 4. Far Advanced (secondary infections). The last three classifications are each further divided in groups of a, b and c, according to the systemic and physical reaction to the toxins of tuberculosis. Far Advanced "C" would indicate a terminal state.

"Minimal[2] is a very early secondary infection with only a slight infiltration in some area or areas of the lungs, usually the apices. Moderately Advanced is more extensive infiltration of a whole lobe of one lung with little or no visible cavitation and no serious complications. Far Advanced shows definite evidence of marked cavity formation or other tuberculous complications."

After the patient has been on treatment thirty to ninety days the amount of exercise and activity or up hours may be increased if the toxic symptoms, such as fever, cough, shortness of breath, etc., has improved. Some recreational activities are provided for a person as soon as they reach a state of improvement that will permit it. One picture show a week (modern talking), Sunday School and church services on Sunday, educational talks on some phase of tuberculosis which patients should know in order to cure and prevent tuberculosis, lunch with members of the family on the grounds at properly spaced intervals, and any band, orchestra, high-school play or other wholesome entertainment that can be gotten from outside from time to time.

Food is also a very important item in a sanatorium. It must be wholesome and well-cooked. Milk and eggs always play a prominent role in the feeding of tuberculous people. We do not now believe they should be given to the point where other foods cannot be tolerated. Vegetables and fruits are very important. Because of the nature of the rest cure, to be able to keep tuberculous people constantly pleased with their food would try the patience of Job.

A patient must have the feeling that he is in the right place and receiving proper treatment if the best results are to be had. Homesickness is one of the greatest enemies we have, but this is partly overcome in a sanatorium because everyone else is in the same plight and a psychology is developed that tends to think more of getting well than going home. It is a fact if we can persuade a patient to stay three weeks, the per cent who go home because of homesickness is greatly reduced. The general atmosphere at the sanatorium is one of cheerfulness and everyone is hoping for a cure. Even when told the chances are very poor, the average person is still hopeful that there has been a mistake in his personal case.

Sanatorium patients do well because they acquire a different outlook on tuberculosis and recovery than they had at home. It is a fact, however, that a very small per cent can never become adjusted to an institution and are better off at home even if they endanger the rest of the family.

Doctors, nurses, waitresses, cooks and all sanatorium employees are trained to handle this disease and to develop the peculiar bedroom manner that will fit the restlessness and irritability caused by long periods of rest and inactivity.

Patients may become semi-ambulatory and go to their meals, to the bath-room, and make their own beds, which by the way is not nearly so harmful to them as late parties, where they play bridge, poker and other types of entertainment that tend to stir their emotions and prevent relaxation. They then observe rest hours, which means in bed, prone or semi-prone, with no reading but complete relaxation from 9:00 to 11:00 a.m. Up at 11:00 a.m. and prepare for lunch, read, lounge around and rest again from 1:00 to 3:30 p.m. From 3:30 to 4:00 p.m., pulse and temperature are taken. They may be up then until 8:30 p.m., at which time they must go to bed, to rise again at 7:00 a.m.

If toxic symptoms disappear, normal weight is reached, fever free, cough lessened

or ceased, sputum lessened, etc., patients may start on graduated exercise. If the pneumothorax has the cavity closed, sputum is absent or persistently negative, the patient may go home if arrangements can be made to receive this treatment there and a suitable place can be had to carry on the rest treatment.

Since institution of the various forms of surgical collapse of the lungs and especially intrapleural pneumolysis, in conjunction with unsuccessful pneumothoracis, pneumothorax, phrenic nerve crush and various stages of thoracoplasty, sanatoria have been able to double their turnover.

Our aim is to get the patient negative for the tubercle bacillus as soon as possible. A mere negative sputum or even series of negative sputums is not always sufficient. And ative, stomach lavage and smear has shown sputums is not always sufficient. And the tubercle bacillus which could not be found any other way.

When a patient leaves the sanatorium, he is classified as:

1. Dead.
2. Unimproved: progression of the disease.
3. Improved: constitutional signs lessened or absent, cough and expectoration with bacilli usually present. Physical signs and X-Ray findings are those of a stationary or retrogressive lesion.
4. Quiescent: absence of all constitutional symptoms, expectoration and bacilli may or may not be present, physical signs and X-Ray findings to be those of a stationary or retrogressive lesion, the foregoing conditions to have existed for at least two months.
5. Apparently Arrested: all constitutional symptoms and expectoration with bacilli absent for a period of three months, the physical signs to be those of a healed lesion. X-Ray findings to be compatible with physical signs.
6. Arrest: same as apparent arrest, except for a period of six months.
7. Apparent cure: same as Arrest except for a period of two years.
8. No Active Tuberculosis Found: naming non-tuberculous disease, if any.

Obviously we have few of the Arrested and Apparently Cured cases on our list because we need the bed space; however, many patients, after an Apparently Arrested state, start gradually working at the santorium as assistant nurses, orderlies, laboratory assistants, or office assistants and stay until apparently cured.

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Leprosy In Oklahoma*

Case Report

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Leprosy is one of the oldest diseases known to man. In the old and new testaments of the Bible there are one hundred and seventy-three verses devoted to the subject of leprosy. One of the three signs that God gave to Moses was that he would give him leprosy and as rapidly remove the disease from him. We now know that most of the skin diseases described in the Bible were not leprosy, but psoriasis.[1]

It has been estimated that there are from one to four million lepers in the world today.[2] Widespread occurrence of the disease is found in India, China and the Philippines and certain parts of Africa. The disease still smoulders in many other areas, such as, Puerto Rico, the Virgin Islands, certain European countries and the Americas. Leprosy was not an uncommon disease in the delta of the Mississippi River one hundred and fifty years ago. In 1894, Louisiana moved its lepers to Carville, which in 1921 became a Government hospital.[3]

In Oklahoma the incidence of the disease has been very small. In the records of the leper colony of Louisiana only two cases were native Oklahomans. One was admitted from Colorado, and the other from Texas. There have been four other persons admitted from Oklahoma since 1921, but they were not natives of the State. In the past twenty years two cases of leprosy have been seen by Dr.

*From the department of dermatology, University of Oklahoma, service of Dr. E. S. Lain. Read before the Section on Dermatology and Radiology, Annual Session, Oklahoma State Medical Association, May 7, 1940, in Tulsa.

Fig. 1. Author's case. Maculo-anesthetic and nodular lesions. The right hand shows the atrophy of the interosseus muscles. Hansen's bacillus present in the nodular lesions.

Fig. 2. Author's case. The dark areas represent the maculo anesthetic lesions. Note the small nodules over buttocks and thighs.

E. S. Lain, of Oklahoma City, and two cases have been observed by Dr. James Stevenson, of Tulsa. The case reported here will go to Carville soon.

ETIOLOGY

Mycobacterium Leprae was first described by G. A. Hansen.[4] It is still believed that Hansen's bacillus is the cause of leprosy even though it has not satisfied Koch's postulates.

CLASSIFICATION

Hopkins and Denny[5] have recorded those cases showing nerve symptoms as nerve leprosy, including in this type cases presenting anesthetic macules with an annular configuration. This type of macular lesion is found often in the otherwise pure type of nerve leprosy, but seldom in the pure type of skin leprosy. The skin type includes those cases presenting nodules, tumor masses, infiltrated elevated patches and those macules (not necessarily anesthetic) that do not show any central clearing in the lesion. The mixed type includes both the lepromatous (nodular or tubercular) and neural forms in one patient.

SIGNS AND SYMPTOMS

Cochrane,[6] who is secretary to the British Empire Leprosy Relief Association, has given the following signs and symptoms in the two types of leprosy.

"*Nerve Leprosy*: The earliest signs of the disease are most often signs of nerve involvement: These show themselves in four ways:

(a) Depigmentation—The patches are light in color, but in a very dark skin may have a coppery appearance. The depigmentation is never absolute as in vitiligo. The patches are smooth and may or may not be anesthetic.

(b) Anesthesia — This is the most common sign of nerve involvement. Fine temperature sense is first lost, next fine superficial touch sense, and, later, gross pain and temperature sense, and lastly, deep pressure sense.

(c) Nerve enlargement — The most common nerves to become enlarged are the ulnar at the elbow, and the peroneal as it winds around the fibula. The neuritis may be very severe.

(d) Muscular paralysis—This is usually a late manifestation and by the time this is apparent, the diagnosis is beyond doubt.

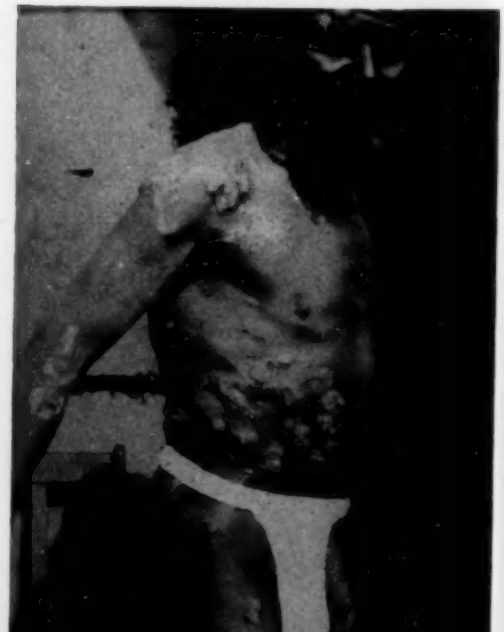

Fig. 3. Lepromatous leprosy. Case seen by Drs. E. S. Lain and A. R. Lewis in 1919. Patient died at Nowata, Oklahoma, six months later.

Skin Leprosy: If the early nerve leper remains untreated, he may sooner or later begin to show skin manifestations. When the disease has reached the stage of skin nodules, the organisms have been distributed throughout the body and the disease has become disseminated. Therefore, it is at this stage the leper most frequently complains of rheumatic pains, general malaise and periodic febrile attacks, which may last from a few days to many weeks." This form is commonly called lepromatous leprosy.

Leprous lesions generally consist of masses of connective tissue in which there is infiltration of lymphocytes, plasma cells, and other types of mononuclear cells. The lymphocytic infiltration is most marked around the vessels, especially throughout the corium.

Fig. 4. Lepromatous leprosy. Case of Dr. M. M. Roland. Seen at Muskogee, Oklahoma, in 1911.

The organisms may be found in the walls of the vessels and scattered in masses throughout the corium, particularly in the so-called large foam cells. The leprosy bacillus may, also, be demonstrated in the nerve sheaths, sebacious glands, the sweat glands, and sometimes in the epidermis.

DIAGNOSIS

A diagnosis is made from the presence of the signs and symptoms previously discussed, and the finding of the microbacteria leprae in the nasal secretions or in the skin lesions.

COURSE

Leprosy tends to be a self healing disease. The leper usually dies from some intercurrent infection, but sometimes as a result of the cachexia induced by repeated reactions. If this does not happen and the disease continues to its ultimate end, it leaves the patient deformed and mutilated. It is convenient to describe three stages in leprosy:

(a) The early stage when the body has acquired no resistance to the organism

(b) Stage of commencing resistance, when the body shows signs of reacting to the invading bacilli

(c) The stage of subsidence of the disease

TREATMENT

Since leprosy is a chronic disease, the success of one's treatment depends as much on the maintenance of the patient's general health as on any specific remedy used. This

Fig. 5. Lepromatous leprosy. Case of Dr. E. S. Lain. Treated at University Clinic 1918-19. Patient's brother also had leprosy.

means the treatment of any predisposing disease and the use of good food, exercise, occupational therapy, fresh air, and strict personal hygiene.

Specific treatment: Practically everyone remains attached to chaulmoogra oil or its esters. Charles Flandin,[7] in France, uses a cholesterol-Chaulmoogric compound intravenously. It is a colloidal suspension containing three per cent of chaulmoogric extracts. He reports very good results in acute cases.

Potassium iodide and protein shock have a limited use in selected cases. Vitamin B1

intramuscularly for the relief of nerve pain has been used with a high degree of success by Badger and Patrick.[8]

CASE REPORT

S. H., a white male, aged 63, was born in Tennessee and moved to south Texas at age three. He lived near Waco, Texas, for ten years before moving to southeast Oklahoma. Early in 1939, he first noticed sharp pains in the extremities. About March, 1939, he noticed weakness and fever. At this time he observed difficulty in breathing through his nose and that the nose and ear lobes appeared enlarged. The first skin lesions appeared as irregular-shaped, reddish plaques over the extremities. The patches soon spread over the entire body, and by July, 1939, he had lost his eye lashes and portions of the eye brow, and he had very little strength in his right hand. It was only a few weeks later that he burned his fingers while smoking. He reports that he was quite ill for several months, but was much improved when he came to the University Hospital on August 16, 1939.

Examination — A well developed, fairly well nourished white male about sixty-five years old. The face showed many areas of infiltration which gave him a deformity described as leontiasis. The ear lobes were thickened. The nose, chin and forehead were enlarged. He breathed through the nose with moderate difficulty. The chest revealed no abnormalities. The pulse was 70, the respiration 20, and the temperature 98. The abdomen did not contain any palpable masses. The ulnar nerves were greatly enlarged and tender. The fingers of the right hand were greatly enlarged and tender. The fingers of the right hand could not be straightened and there was marked muscular wasting. The peroneal nerves were less involved.

Skin—The greater portion of the skin was involved in reddish patches consisting of rounded, oval, and irregular macules, ranging in size from 3 to 10 centimeters. Many of the lesions had coalesced to form gyrate or polycyclic figures. These areas were either devoid of hair or had scanty hair growth. He had very little hair on the pubis and scalp. There was a loss of fine temperature and touch sense in the skin lesions. The right hand showed a loss of gross pain and temperature sense.

In addition to the macular plaques he had numerous pea sized subcutaneous nodules over the extremities and buttocks. The tubercle-like lesions were more pigmented on the surface than the large macular lesions.

Laboratory: He had a marked secondary anemia upon admission which remained unchanged during his hospital stay. His blood and spinal Wassermann tests were negative. Scrapings from the nasal passages were negative for leprae bacilli before and after sodium iodide. Three separate biopsies were made and studied.

Histopathology: The examination of several slides by the usual staining methods failed to reveal organisms. However, by the use of special acid fast stain for tissues, many acid fast organisms could be demonstrated. There was a marked cellular infiltration throughout the corium. There were many large cells with foamy cytoplasm throughout the inflammatory area, also, medium sized multinucleated giant cells. In most of the sections there was considerable healing. There was no evidence of caseation, but in some fields there was early necrosis. All smears taken from fresh tissue revealed many long, extremely slender acid fast bacilli arranged in bundles and parallel rows. The clinical and histopathological findings supported a diagnosis of leprosy.

Progress: He had been living under very poor conditions. He was put on a high vitamin diet and was given 2 cc. of liver extract intramuscularly every other day. He soon gained weight and the plaque lesions faded to a considerable degree after a month. He was not given any of the chaulmoogra oil preparations, and was dismissed October 15, 1939.

Subsequent progress: He was again seen and examined on April 7, 1940. He had continued to gain weight and felt generally improved. Anesthesia persisted in the plaques and over the arms and hands. He had the week before scalded his hands while washing, and had the right hand bandaged. The two hundred or more nodular lesions had all healed, leaving areas of cutaneous atrophy. He expressed an eagerness to go to the U. S. Marine Hospital at Carville, Louisiana, arrangements for which are being made.

SUMMARY

1. A case of mixed leprosy has been seen in Oklahoma and studied.

2. Marked improvement took place following non-specific treatment.

3. There has been a very low incidence of leprosy among native Oklahomans.

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The Advantages and Disadvantages of Prostatic Resection *

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Ever since Hugh Young devised the first prostatic punch, the dream of urologists has been to perfect a safe method of removing obstructing lobes through the urethra. This finally culminated some years ago in the development of modern resectoscopes, which were perfected and thrown indiscriminately on the market. They were exploited by commercial concerns who had little knowledge of the dangers and difficulties associated with their use, and the message was carried to patients by enthusiastic users of the instruments so that today there has been built up in the public mind a feeling that this is a simple, safe, and easy method of doing what was formerly considered a very dangerous and expensive operation. Even the medical profession has been led to believe that the mortality from this procedure is around one per cent, thus making it safer to have a transurethral resection than to do the simplest minor operation.

Such exceedingly favorable ballyhoo has been one of the main disadvantages of resection. On the face of it, it looked easy and simple and men who had never done major surgery of any kind felt that here was something which they could do with complete safety. All they had to do was pass an instrument into the bladder just like a cystoscope, look around, trim out the obstructing lobes, and withdraw, leaving benevolent nature to complete the healing process. Also to the patient this looked like common-sense and appeared to be much better than an open incision with its pain, disability, expense and danger of infection or hemorrhage. Neither they nor the doctors gave enough consideration to their dependence upon the operation of a high frequency machine or upon the continued functioning of a small light globe in the instrument or upon the proper flow of water in and out of the instrument. Only experience could teach them that the occurrence of any sort of mishap might stop the operation suddenly, leaving a bleeding point or traumatized area, which could later cause a real catastrophe to the patient. Accordingly, many lives have paid the penalty of inexperience, lack of equipment, or lack of consideration of all the circumstances surrounding the case. It is even now better for the man who only occasionally does a cystoscopic examination to operate upon his patient by suprapubic enucleation (an open surgical procedure with which he is familar) than to attempt a resection. Also it is far better to do this if he does not possess all the necessary equipment because due to failure of the equipment, he may place his patient in far greater danger than he would be by any open surgical procedure. As a matter of fact, even experienced urologists, who have done all types of major genitourinary surgery, had to go through a long period of self-training before any of them could be certain of doing a satisfactory resection operation. This is proved by the fact that the very men who now claim a mortality of one to one and one-half per cent reported mortalities of twelve to fifteen per cent in the beginning.

This leads to mention of the second disadvantage of resection. Its technique requires the doing of a number of operations before it can be learned sufficiently well to make the operator a good risk for the patient. It can be taught only by the actual process of doing it, and the teaching is more or less difficult because only one person can look through the cystoscope at one time. Other operations can be taught by diagrams and on the cadaver, and then actually letting the apprentice surgeon assist an older surgeon in doing them.

Resection not being so well adapted to such teaching, the result has been that experienced members of the profession, who have had sufficient training and experience to understand the difference between dangerous and non-dangerous surgical procedures, have been quite conservative in their attitude. Some have gone so far as to say that it should be reserved for only certain types of prostatic enlargement such as median bar. On the other hand, other men who have been fortunate in their experience have from the beginning insisted that any kind of prostatic obstruction could be removed in this manner.

During recent months writers have been trying to sift the truth from error as to the exact value of resection in prostatic surgery, and it seems to have been finally

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summed up well by Foley in a recent number of the Journal of Urology, wherein he says that resection is a procedure which should be done only by men of wide cystoscopic experience who are thoroughly at home when looking into a bladder. Dr. Henry Browne has also called attention to this fact and has urged that each resectionist equip himself with the various kind of telescopes so that he can see better what he is attempting to do. To the voices of these men I would add that the resectionist should be trained not only in cystoscopy but he should be a good abdominal surgeon so that he understands how to diagnose and control ileus, hemorrhage, peritonitis, hiccoughs, and other problems which are common to all forms of major surgery. Not only this but he should be perfectly able to do the major surgery required by rupture of the bladder, injury of the rectum, urinary extravasation, or massive hemorrhage. It cannot be too much emphasized that prostatic resection is a major surgical procedure of highly specialized type and is associated with many dangers, any one of which may call for old fashioned surgical knowledge. I mention this because I have observed that some of our very best resectionists are deficient in fundamental knowledge, which general surgeons learned years ago. For example, I have recently seen a case of general peritonitis with great distention being conscientiously treated by gastric suction, omission of all fluid and foods by mouth and so on, but at the same time giving the patient sulfapyridine by mouth. Sulfapyridine is an irritating drug. Any one who has had much experience treating peritonitis would know that the administration of such a drug through the stomach is going to increase irritation of the stomach and intestines. I have heard a good urologist advocate that even in the presence of a ruptured bladder, it is not necessary to open the abdominal cavity but that a suprapubic drainage of the bladder is all that is necessary. I submit that any man who has had general surgical training would feel that even if only one patient out of a hundred has infected urine or fluid in his abdominal cavity or tissues, that one person should have the benefit of abdominal drainage. The surgeon who has been accustomed to opening abdomens is not afraid to open them, whereas the man who has not had such training prefers to take the risk of not doing so. I am perfectly willing to grant that it is possible for a man to be an expert resectionist who has not had previous general surgical training; but it is not safe for him to do resections unless he is associated closely with a general surgeon of wide experience, who can come to his aid if and when needed. Even this has the disadvantage that the patient is subjected to extra expense of consultation, an objection which in this day and time is a serious one, because the public objects to having to pay too many specialists in the same case. They cannot understand why the man who operates upon them, whether it be by scalpel or a resectoscope, is not competent to carry them all the way through the operation.

I do not like any surgical procedure which is not done in full view of the operator and in a location where hemorrhage or other disaster can be controlled. This being the case, I was not too enthusiastic about resections in the beginning but rather felt that they were suited principally to median bar obstructions such as were amenable to the old cautery punch. Today with the more perfect instruments which are at our command and with the experience of ten years to draw from, I think there can be no question that resection is a satisfactory method of relief in at least eighty or ninety per cent of benign enlargements and certainly entails no greater risk to the patient than any other method of relief which has been developed through the years. In addition, it undoubtedly is less painful and cheaper for the patient. Having made this statement, I will now add that the remaining ten or fifteen per cent of cases may be treated by resection with the addition of suprapubic drainage. These cases fall into two general classes. First, those in which it is almost impossible to get the instrument into the bladder because of great deformity or enlargement of the lobes of the prostate, thus necessitating more trauma than an open suprapubic operation would call for. Second, those in which visualization is not good enough for the operator to understand the exact structure of the bladder neck, such as cases in which there is a lot of bleeding or where the fluid content of the bladder is so murky that the operator cannot see well, etc. In either of these cases a suprapubic opening should be made so that the operator can familiarize himself with the exact changes which have taken place in the bladder neck. If he then desires to do a resection in place of a suprapubic enucleation, he may do so with perfect ease and will be able to get his instrument into the bladder by inserting a finger through the suprapubic wound and assisting the instrument through the obstructing lobes. In such a case also he can do a resection with greater safety by occasionally palpating through the fistula and determining just where the instrument is and just how much has been cut away. I have done this on more than one occasion and have felt that it was less risky for the patient than would have been a complete suprapubic enucleation. The judgment of the operator is supreme in do-

ing a resection, and the life of the patient depends entirely on this judgment; and I sometimes wonder if many urologists are not more willing to take a chance under conditions wherein their mistakes will be hidden inside the patient than they would be if the wound were out in the open where every one could see it.

Assuming that the instrument can be inserted into the bladder and that vision is good, I see no contraindication to doing a resection in any case where an operation is contemplated. If the obstruction is almost totally in the median lobe, there is no difficulty in removing it with a resectoscope in any case. If the obstruction is both in the median lobe and in the lateral lobes, the operation should begin with the removal of one lateral lobe, preferably beginning as far anteriorly as possible and resecting toward the midline. Not only should the surface facing the interior of the bladder be resected but the removal should be carried as far distally as the verumontanum, then the opposite lateral lobe should be removed in exactly the same manner, and finally the median obstruction should be attacked. The reason for this order of procedure is that there will be less hemorrhage if the arteries which come in from the lateral side are cut off in the beginning. Also it is much easier to locate the median lobe and see its relation to the ureters and trigonal muscles after the large masses of the lateral lobes have been removed. In the beginning of my work I did not know that it was necessary to come so far out in the prostatic urethra as I now routinely do, but by virtue of the fact that the lateral lobe continued to obstruct the prostatic urethra after I thought I had done a good operation at the bladder neck, I was many times forced to go back and do a second resection.

When all visible obstructions have been removed so that there is apparently a good open bladder neck, I feel that it is wise to quit. Many men in the profession today write about the large amount of tissue which they remove and some go as far as to say that they can peel out practically all of the prostatic tissue down to the encircling bladder muscle and capsule and are perfectly able to distinguish between the two by vision. I would not dispute such men but would simply say that they are unusually skillful and that the majority of men cannot do this. It seems to me, therefore, that the more safe and conservative method is to stop when one has relieved the trouble for which the patient came in, rather than to run the risk of digging out far enough that one goes through the wall of the bladder or produces a hemorrhage of uncontrollable nature. It has been my habit for some time to remove tissue until I think enough has been taken out, then to fill the bladder with water, withdraw the cystoscope, and press down on the dome of the bladder. If a good stream comes out of the urethra, I feel I have done enough. If not, I put the instrument back and continue resecting until the stream does come freely. When this happens, I quit again and the only cases in which I have had trouble during recent months have been those where I continued to remove tissue after a good stream came through.

Post-operative care of resection cases has the advantage that it is ordinarily not complicated by shock or pain. On the other hand, it has the disadvantage of calling for more care and attention regarding hemorrhage. Even though the majority of my patients reach the bed with a pulse rate of not more than 100, I routinely give them 1000 ccs of 5 per cent glucose intravenously and allow them nothing but hot water by mouth during the first twenty-four hours in order to prevent intestinal distention. Pain is a negligible factor and hypodermics are given as needed. Many patients come through without a single hypodermic. Control of hemorrhage has been no problem since the Foley bag was introduced. I always put one in immediately after the operation and leave it. The only trouble I have had has been that it occasionally becomes plugged with mucous or blood clots and has to be opened by irrigation. I have found that a simple, ordinary metal ear syringe is the best clot dislodger. By means of it, I can apply a powerful suction which will draw any ordinary clot through the catheter. I think it is far better than the elaborate evacuators which are used by some men. Some resectionists say to wash the catheter frequently to keep it clear of clots, and others say do not irrigate. It seems to me that the sensible thing to do is to wash only when the catheter is stopped up. If the patient can possibly afford it, a trained nurse for the first twenty-four hours is one of the best investments he can make because she can watch the catheter and general condition in a way in which no floor nurse ever does.

Summarizing, I believe that resection has been generally advertised to be simpler and safer than it actually is. The operation has the disadvantage that it is difficult to learn except by doing it and requires considerable experience and equipment in order to make the operator competent and able to take care of such emergencies as may arise. I think that none except those who are well trained in the use of a cystoscope should ever undertake it and that even these should be well trained in general surgery. Given an ex-

perienced, competent operator with sufficient equipment, I believe that eighty to ninety per cent of cases can be easily handled by resection and that the remaining ten or fifteen per cent can be handled by resection plus suprapubic drainage. I think it is a nice question of judgment as to when enough tissue has been removed and agree that the operator should remove all that he can safely take. The simplest way to find out when enough has been removed is to fill the bladder with water, remove the instrument, and press gently down on the dome of the bladder. If sufficient tissue has been removed, a good stream will be forced out through the urethra. Post-operative care should be exactly like that of an abdominal operation with the addition of watching for hemorrhage and seeing that the bladder drains properly.

DISCUSSION

D. W. BRANHAM, M.D.
OKLAHOMA CITY, OKLA.

Advantages and Disadvantages of Prostatic Resection

The transurethral surgical approach for the relief of prostatism has been a controversial subject for the past ten years. Despite much adverse criticism, nevertheless, in competent hands it has been firmly established as the method of choice for the treatment of all but a small per cent of patients who suffer from this ailment. However, the profession has begun to realize it is a procedure demanding the highest developed endoscopic skill on the part of the operator, and unless the surgeon be so equipped through much training and experience, the results in general will be poor. I know of no branch of surgery, unless it is plastic surgery, that reflects more clearly the skill and ability of the operator than prostatic resection.

The absolute requisite to a successful resection is the thorough removal of all obstructing tissue in the bladder neck. This must be excised cleanly and quickly with a minimum of coagulation. To remove less than the quantity required to provide a free passageway for the urinary stream is fraught with danger, for then we have a condition that favors unsatisfactory end results and serious complications, namely, traumatized devitalized tissue complicated by urinary tract obstruction.

In the great majority of instances, an operative period of an hour will provide ample time for the removal of approximately thirty grams of tissue. Not infrequently seventy or eighty grams of tissue will be found necessary for removal, and in these I believe a repetition of the procedure rather than a single prolonged session will be found more advisable. In an occasional instance where the obstruction is of such size as to require resection of more than eighty or 100 grams of the growth the choice of surgical treatment should be by an open operation.

May I again emphasize that transurethral surgery in the hands of the experienced surgeon is the most desirable surgical method for the treatment of the obstructing prostate. When experience and skill is lacking it is a procedure in which the results that follow are in general most unsatisfactory and not infrequently disastrous.

Artificial Pneumothorax in Non-Tuberculous Disease of the Lung*

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TULSA, OKLAHOMA

The deliberate induction of pneumothorax, as brought out by Forlainini and others many years ago, and popularized by Murphy in this country, was primarily a therapeutic measure in pulmonary tuberculosis. Rest for the affected lobes was obtained, and over the years, particularly since 1920, this procedure has become a standard method of treatment of tuberculous infections of the lung. Bilateral partial collapse has been used, and in properly selected patients fairly satisfactory results have been obtained. The disadvantages of this procedure are, of course, many, but in capable hands and properly selected patients, the benefits outweigh them.

Although apparently simple, pneumothorax is rather a heroic procedure. The displacement of the lobes, the mediastinal shifting, the alteration in vital capacity, the

*Read before the Section on General Medicine, Annual Session, Oklahoma State Medical Association, May 7, 1940, in Tulsa.

disturbance of cardiac function, not to mention the rather vague "pleural shock" join to produce physiological changes, not all of which are desirable. The lung, however, can be manipulated to a certain degree, and observations on this fact are presented.

The writer and associates undertook several years ago to determine the value of pneumothorax in lobar pneumonia. Some work was being done in other centers, and their results were carefully studied. We could not convince ourselves that the mere lessening of the space occupied by a lobe changed conditions sufficiently enough to alter the prognosis. It is true that although affected portions of the lung show a degree of collapse different than the normal and that the blood supply through them is probably diminished, with proportionally lessened absorption of toxic products, we must bear in mind constantly, in the therapy of lobar pneumonia, that it is a systemic disease, and that death from it results from a vasomotor inertia, rather than from, except in rare instances, actual pulmonary insufficiency.

An outstanding symptom in the first few days of this disease is pain in the chest, of pleural origin. This can be controlled by opiates in most cases. Given in adequate doses the respiratory rate diminishes in both rate and depth, tending to accentuate the existing anoxemia and cyanosis. It was found by us that induction of artificial pneumothorax in a satisfactory number of cases separated the visceral and parietal pleural layers, relieving the constant friction and producing gratifying comfort to the patient. It was not necessary to maintain this very partial collapse for more than forty-eight hours, as the pain frequently disappears by that time. In twenty-four cases, all proven by either radiological or unmistakable physical signs, pain was totally, or largely relieved.

The technique used is essentially the same as the induction for pulmonary tuberculosis. The patient lies on the side opposite to the one treated, with a pillow under the ribs to render the upper side more convex, thus widening the interspaces, and the arm moved so that both it and the scapula are away from the puncture site. The skin is swabbed with any convenient antiseptic, and an intradermal wheal raised with procaine. The small needle is carried through to the subcutaneous tissues. We have always wondered if attempts should be made to anesthetize the pleura, especially in the first induction. It is easy to carry an anesthetic into lung substance, and when one uses the pneumothorax needle, it is sometimes helpful, even at the cost of a momentary pain to the patient, to know more definitely that the parietal pleura has been reached.

The needle, after finding the pleural space, is attached to the apparatus—we find the Davidson machine very satisfactory — and manometer readings obtained. These will differ from the quiet variations seen in tuberculosis refills. Pressure is frequently highly positive due to the labored and grunting respirations seen.

The first fill should not exceed 300 cc. This is scarcely discernible on fluoroscopic examination, but it usually causes enough separation of the layers to provide relief from pain, and easier respiration is seen almost at once. Refills are determined by the patient's own sensation of pain. We have seen one instillation of air suffice, and were obliged, in another individual to repeat in ten hours.

Four of twenty-four patients so treated succumbed; a mortality of sixteen per cent. The general mortality that year, on the same service, was twenty-eight per cent. No claim, however, is made that the pneumothorax was a factor in the smaller mortality; the series is too small to justify conclusions of that type. We do not feel that the pneumothorax was a contributory cause in three of the deaths. In the fourth, it probably hastened or caused exitus in an individual who was quite toxic when brought in, suffering from a middle lobe consolidation and very severe respiratory pain over the lower anterior chest. A few hours after his fill, engorgement of the neck veins appeared, signs of vena caval obstruction were seen, and death followed. Necropsy did not reveal the precise cause of the venous engorgement. The pathologist was of the opinion that the heart was not at fault, but that the middle lobe, in withdrawing from the chest wall, pushed its non resilient medial surface against the right chambers of the heart, causing interference with venous return. This was a conjecture, as these findings were not demonstrable after death. It is difficult to escape the feeling that pneumothorax had something to do with it.

No other untoward results were encountered. Theoretically effusion should appear more readily. This did not occur with any magnitude in the treated cases. We believe that practically every patient with lobar pneumonia will have a small pleural effusion, most of which do not become purulent. Empyema developed in one of our cases, which was successfully treated by aspiration and air replacement.

Although sulfapyridine and therapy with type-specific sera have made radical changes in the handling of lobar pneumonia, it is felt that in properly selected patients, who are distressed by severe pain in the early stages, pneumothorax has occasional value in treatment.

Production of pneumothorax in the treatment of effusion and empyema has been debated at great length. In any procedure of aspiration of the pleural space, a variable quantity of air inadvertently enters, unless the system is a closed one in its entirety. In withdrawing large quantities of fluid, it seems desirable to observe intrapleural pressure with a manometer and to compensate for wide changes with air. Any user of pneumothorax is aware of the fact that a small amount of air can restore pressures caused by much larger quantities of fluid. We feel that, especially in individuals possessing a fragile cardio-vascular system, shock produced by mediastinal shifting can be prevented either by removing small amounts at a time, or by injecting a lesser amount of air which is absorbed slowly and in a way, cushioning the shock. It is, of course, true that enormous quantities of fluid have been withdrawn without unpleasant results — as much as 4000 cc. It is equally true that cardiovascular collapse has followed removal of as little as 300 cc. Thoracentesis may be hazardous in the elderly or debilitated.

In effusions in young individuals, most of which are tuberculous, we have felt that air should be put in, not so much as to compensate for abrupt expansion, but to maintain a space where pneumothorax therapy may be continued should it be found desirable, when in a few days a more accurate diagnosis of tuberculosis could be made. Obliteration of pleural space by adhesions takes a surprisingly short time to develop, especially in the presence of effusion; this may make a great deal of difference in the patient's course. It is usually the fact, however, that parechymatous involvement has not developed when the first effusions appear.

The use of the so-called diagnostic pneumothorax, when radiographic contrast or differentiation is desired undoubtedly has a place in the early diagnosis of lung tumors, which are apparently increasing in frequency. A lung tumor offering few changes taken in the conventional manner may become very conspicuous after partial collapse is induced, the changes again being based on the difference in elasticity of normal and neoplastic tissue. The writer has not had sufficient experience with it to venture an opinion.

In certain acute lung abscesses, we believe, pneumothorax offers a most valuable assistance. By *no means* are all abscesses suitable. One must wait until good localization has taken place, and until a fairly developed wall appears. The location is likewise important. A hilar position offers, both theoretically and actually, a more favorable result, as adequate bronchial communication is more probable. Emptying of the abscess cavity and approximation of the walls are the desiderata. If communication with a bronchus is demonstrable, either with lipiodol, or the observation that pus is being expectorated, and the above condition of localization met, it is felt that cautious collapse can be begun without delay. Insertion of the needel should be made away from the site of the abscess, to avoid accidental penetration of the abscess, if peripheral, with subsequent pleural contamination. Careful record of the temperature, pulse, and quantity of sputum should be kept. The collapse should be conducted slowly, for several reasons other than those of obvious caution. Fresh adhesions near the abscess may be torn, resulting in superimposed spontaneous pneumothorax. The degree of collapse must be watched as it is theoretically possible to defeat one's own purpose by occluding the means of egress of the pus. We have not had this happen as yet, but nevertheless maintain careful watch for it.

It has not been necessary to either achieve a high collapse, or maintain it for a long time. A twenty-five per cent compression has been the most used, and six weeks the longest time maintained. Negative pressure is conserved. Question may be raised as to the actual efficacy of this method, as it is well known that acute abscesses may heal spontaneously. It is likewise freely admitted that I have no control series. The rapid disappearance of fever, sweats, and leukocytosis, with the decline in production of sputum have been so striking, after an illness of some weeks, that I have been reluctant to withhold this means of therapy to establish a non-treated series. Excellent and permanent results have been secured in six consecutive cases, five of which were treated by collapse; the other had such a small post pneumonic abscess, with fluid level, and the constitutional symptoms and signs so slight that it seemed she would recover without assistance, which she did.

We have made no attempt to investigate the presence of residual cavities, as these individuals are, so far as the lungs are concerned, without complaint.

Pneumothorax treatment of bronchiectasis and bronchiectatic abscesses, is, as far as personal experience is concerned, a dismal failure. Diaphragmatic adhesions are usually so dense that no collapse results; indeed, if air can be put in at all. The individuals are usually invalids of long standing, with well developed stagnation in the lower bronchial tree and the lesions are frequently bilateral. If a collapse could be secured, as it no doubt has been by others, it is possible that some benefit might result. We have not had that good fortune. Interruption of the

phrenic nerve has not given results sufficiently good to repeat the procedure in others.

SUMMARY

1. Artificial pneumothorax is valuable, in selected cases, in providing pain relief in lobar pneumonia or acute pleuritis.

2. It may be used in effusions, to prevent mediastinal shock.

3. Excellent results have been obtained in acute lung abscesses, using stipulated precautions.

4. Diagnostic pneumothorax may be used in questionable parenchymal shadows.

5. It is of little or no value in bronchiectasis.

The General Practitioner's Practice With Macrocytic Anemia*

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KINGFISHER, OKLAHOMA

Physicians probably can best hide their lights under a basket by giving pink pills to pale people. That we are doing this very thing is evident by the fact that there is an ever increasing number of shotgun remedies for anemia by the various pharmaceutical houses. We must be contributing to this very lucrative business, or so many preparations would not be presented on blotters as the panacea for the pale.

These remedies do not only contain liver, iron, copper, manganese, stomach tissue, vitamins, but nicotinic acid. I am sure if we do not consider ourselves as detectives searching for the cause of anemia some company will have to add thyroid, quinine, antiacids, anthelminetics, etc., to the above combinations. Also in the additions one might include vitamin K with bile salts for postoperative bleeding and anemias of jaundiced patients.[1] Yes, in the words of Dr. Russell Haden it would indeed be "a dash of this and a dash of that."

Pale people are often considered and treated as a disease rather than a symptom. In the newer and better classification of macrocytic and microcytic anemia, we can easily lose sight of the practical reminder of the older classes of primary and secondary. In general practice among pale country people, the larger majority of cases of anemia are truly secondary to a cause which should be discovered. Lest I be accused of casting stones, let me say that my house is not glass, nor is it a castle on the hill. The following cases are glaring examples of my own mistakes.

Case 1. August, 1936. W. H., 76 year old white male, was seen complaining of weakness, fatiguability, indigestion, gas, numbness, fatigability, indigestion, gas, numb- This Oklahoma pioneer's history was essentially negative, except that the duration of complaints was approximately about a year and had improved at two different times without treatment. Physical examination was essentially negative except for some defective teeth, heart rate, which was too rapid, a generalized arteriosclerosis, underweight, and pale. The blood count revealed a moderate macrocytic anemia. With the typical symptoms of anemia, I considered that his trouble was pernicious in type and started him on liver extract therapy. After a few doses he improved markedly and I did not hear from him for about four or five months, at which time he returned complaining of the same symptoms, only to a more marked degree. In the course of a reexamination he asked the cause of anemia and I made the statement that anemia was due to: 1. Blood loss; 2. Something wrong with the formation of the blood cells; and, 3. Something destroying the blood cells faster than they are made: I then obtained the history that at various times he had bright blood in the stools which had occurred occasionally, but during the last three months had happened several times. A proctoscopic examination revealed an annular carcinoma of the sigmoid. The rest of the story you know.

Case 2. October, 1938. S. B., age 12, complaining of weakness, one year's duration. Because of this weakness she refuses to ride her bicycle to school or take gymnasium. The onset of menstruation began three months ago with a rather profuse flow.

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The periods since then have been characterized by menorrhagia and metarrhagia. History is essentially negative except that the mother states the child would much rather sit around with a book than play with other children. Grades in school indicate a very intelligent child. Examination is essentially negative except that she is underdeveloped for a twelve-year-old child and has a clinical anemia. Red blood count was 3,500,000 with hemoglobin of 65 per cent Sahli. The anemia was microcytic. Thinking that the majority of this child's trouble was due to the loss of blood from her menstrual disturbance, associated with puberty, she was placed on iron and small doses of Fowler's solution. This patient returned six months later with practically no improvement except that her menstrual periods had been more normal in time, duration, and amount. Reexamination revealed a very dry skin of the hands, forearms, and elbows, with some puffiness of the hands and eyelids, and the abdomen showed a characteristic pot-belly. The basal metabolism test was minus 20. The patient has taken thyroid ever since with a very definite improvement in menstruation, growth, appearance of skin, contour of face, and abdomen. The last blood count made in December, 1939, was 4,500,000 red blood cells with 90 per cent hemoglobin, Sahli method, and the BMR was minus 5.

The proper treatment for the case should have been a more definite blood workout with a better history of the gastro-intestinal symtoms and a proctoscopic examination in the beginning. The stopping of the hemorrhage is of course very good treatment in any anemia. In fact, any true case of pernicious anemia which does not respond to what you consider adequate treatment should be closely investigated for actual blood loss, whether it is from the nose, gastro-intestinal tract or urinary tract. In the second case an adequate diagnosis was not made at the onset or the patient would have improved from the start.

These two cases, which show glaring mistakes, should point out that treatment for anemia should not be instituted until an accurate diagnosis has been made. In a country type of practice if we give the patient something to relieve the anemia symptoms it may be some time before we get him back into the office to complete a more accurate diagnosis. If he is not given relief from the start he is more apt to return so that we can find out what will give him more adequate relief.

In general practice one naturally has various types of cardiac patients who have an associated anemia—many angina pains and other types of vascular pain are on the basis of anemia and can be relieved by antianemia treatment. The physiological principle of treating any heart pathology is to see that the muscle receives an adequate supply of oxygen, glucose, and insulin — naturally the only source of oxygen is through the blood. These anemic cardiac individuals are usually improved by the treatment of the anemia provided there is no stasis in the lungs.

A great majority of the anemias encountered in general practice fall in either the microcytic or the macrocytic group.[2] "A microcytic anemia is one in which there is an increase in the number of red blood cells having an average diameter which is less than normal and a mean corpuscular volume below 96 cubic microns. The color index is characteristically less than one, which indicates that the reduction of the hemoglobin is relatively greater than the diminution of the red blood cells. This condition is more frequently associated with the reduction of the iron reserves of the body which results in an inability to synthesize hemoglobin in normal amounts. Frequently there is a favorable therapeutical response to the administration of iron, but improvement rarely follows antipernicious anemia therapy."

"A macrocytic anemia may be defined as one in which there is an increase in the number of red blood cells of the circulating blood having a diameter greater than 7.5 microns and a mean corpuscular volume exceeding 96 cubic microns. Such an anemia has a color index which is usually one or higher. It is generally considered to be due to defective blood formation and is frequently controlled by antipernicious anemia medication, but is ordinarily not benefited by iron therapy."

Definite clinical and experimental proof now indicate that the erythrocytes mature in the bone marrow and are released to the circulating blood, under the control of a regulatory system which functions as follows: "An unknown constituent of the diet which is called the extrinsic factor reacts with the intrinsic factor, probably an enzyme which is normally present in the gastric secretion, to form a substance which controls the rate of development of the red blood cells in the bone marrow. Because these cells are not released under normal conditions until they have fully matured, any disturbance which retards the maturation will diminish the number which is supplied to the peripheral blood, and a macrocytic anemia due to diminished blood formation will develop. This variety of anemia, which is sometimes observed in sprue, is thought to be due to the lack of an extrinsic factor. The fact that some macrocytic anemias show a therapeutic response to the administration of yeast suggests that a dietary deficiency has an etio-

logic significance. It is now recognized that true pernicious anemia is due to an absence or a diminution of the intrinsic factor. Even when the extrinsic and intrinsic factors are available, a macrocytic anemia may develop as a result of other disturbances which prevent the erythrocyte maturing substance from performing its function. For example, there may be a failure in its absorption due to intestinal anastomoses or stricture. Finally, a macrocytic anemia may be due to an inability of the body to store the substance in the liver and release it in an orderly fashion as needed. This is thought to occur in extensive disease of the liver, such as cirrhosis.

The lesions of the gastrointestinal tract which one may expect to find associated with macrocytic anemia are partial or total gastrectomy, infiltrating carcinoma of the stomach, and various intestinal strictures and intestinal anastomoses. Any extensive involvement of the liver such as cirrhosis or acute hepatitis also may give macrocytic anemia.

The severe anemias of pregnancy may resemble pernicious anemia but differ from it because the patient usually recovers. Castle and Straus[3] have studied carefully the number of cases of primary anemia in pregnant women and conclude that there is much to show that the mechanism of production is very similar to true pernicious anemia. That is, the intrinsic factor of blood formation is lacking in the gastric juice. They feel that this factor returns permanently following the termination of pregnancy, thus differing from true pernicious anemia. This bears out the clinical observation of Osler who stated that "the main difference from real pernicious anemia lay in complete recovery." Of course the majority of the anemias of pregnancy are microcytic in type due to iron deficiency, but our status in anemias of pregnancy should be to concern ourselves with the type of anemia as well as check the blood pressure and urine, weight, etc., in our routine check-up. Every pregnancy should have a blood check-up at her first visit, seventh month, and just before term.

The macrocytic anemias in tape worm infestation can only be differentiated from pernicious anemia by finding the ova or segments in the stools.[4] Other conditions sometimes which must be differentiated from pernicious anemia are: colon and pancreatic malignancies, myxodema, nephritis, or the leukemias.

The importance in the treatment of macrocytic anemia is to recognize the etiological factor, because macrocytic anemia in many instances yields to antipernicious treatment, especially to the parental administration of liver extract which eliminates all question of absorption of the gastrointestinal tract.[5] If the patient is not considered as a whole and only the blood picture is taken as a basis of treatment many early cases of myxodema, gastric carcinoma, liver disease, etc., will be clouded by the response to antipernicious treatment. If the macrocytic anemia is a true pernicious anemia the response to liver extract, of course, is very gratifying. It is rather difficult in true pernicious anemia to state precisely the optimum amount of liver extract which is required for each individual patient because various conditions, such as senility, infection, and other unknown factors may require modification in the dosage.

The most practical method to follow is to use the product which is prepared by reputable pharmaceutical firms in dosage recommended by them depending upon the blood as the one criteria to the response of treatment. Because if the subjective symptoms in pernicious anemia are used as the criteria for the amount of liver extract to use, a moderate degree of anemia may persist in an asymptomatic patient. In following an asymptomatic patient cord changes may develop under our nose. Therefore, the blood level must be kept at 5,000,000 RBC's per cubic millimeter. It is generally thought that in patients with pernicious anemia, central nervous system symptoms may appear, or, if present, may progress unless red blood cells are maintained at a high level of normal.

Haden[6] has stated that if deficiencies were detected early and treated adequately it is probable that the central nervous system would never be involved. However, in his experience, 85 per cent of the patients in whom pernicious anemia was diagnosed for the first time already had evidence of neurological involvement. Young physicians often lack the finesse of older man and frequently patients discontinue treatment after they show marked improvement. This is a loss in the battle because the most essential part in the treatment of pernicious anemia is for the patient to really understand that throughout the remainder of his life he must have adequate treatment.[7]

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EDITORIALS

GROUP HOSPITAL SERVICE

This program was inaugurated in April of this year under the leadership of the Oklahoma State Medical Association and the Oklahoma State Hospital Association. The members of these associations had worked long and diligently in an effort to bring to the people of Oklahoma the best possible plan.

The employees of eighty organizations have accepted this service, through which membership has been extended to over 7,000 persons. The plan has paid hospital bills for forty of its members. The shortest period of hospitalization was one day and the longest was twenty-two days.

The program is gradually being extended to the various communities of the state, in keeping with the objective of a state-wide plan. The administrative staff is being aided immeasurably by the enthusiastic support of local medical societies and civic bodies. Community consciousness is developing to a point of civic proprietorship. There are now a total of approximately twenty hospitals cooperating in the program and it is anticipated that twenty-five more will be added within the next few weeks.

Membership in the plan is available only to employed or organized groups, but such persons, for a small additional monthly cost, may include their husband or wife, also all unmarried children under the age of twenty-one years. No medical care is included in the benefits of membership. Services of the physician, physiotherapist, anesthetist, roentgenologist or pathologist are excluded. The plan pays the hospital bill and the patient makes the usual arrangements to remunerate the doctor.

Our Oklahoma Plan was founded on principles evolved through a decade of experience. Those experiences and accomplishments in protection to 5,000,000 people give evidence of sound practices and the ability to meet social and contractual obligations to members. The civic leadership of the Trustees and the cooperation of hospitals and medical societies are serving to firmly establish this new social conception as a public service of potential magnitude.

It is the duty of those of our profession to continue our objectives toward the establishment of Group Hospital Service as a preeminent community resource.—N.R.S.

DO YOUR DUTY

It is very fitting that Dr. Henry Turner should head the movement for Medical Preparedness in Oklahoma as he has been elected to head the profession of the State during this year.

The way the A.M.A. has accepted the responsibility of organizing the profession of the nation is an immense task and can only be accomplished by placing the proper man in charge of the work in each state and this we have done.

Dr. Turner can accomplish little or much, just in proportion to the cooperation received from the individual physicians. Less than 50 per cent of the questionnaires sent out to the physicians of this state have been completed and returned. A follow-up card has been sent out from our state headquarters and still there are many who have neglected to meet this patriotic responsibility.

Your representatives in the House of Delegates voted for this plan of medical organization for preparedness and the A.M.A. has accepted the responsibility. It is your duty to your nation as well as to organized medicine to meet this individual responsibility so that you may be properly classified and prepared to serve in the capacity where you will accomplish the greatest good.

It is, I am sure, not lack of patriotism but negligence that has caused this delay. Please see to it that your questionnaire is immediately returned.

DR. CHARLES ROBINSON HUME

One of our most loved characters in Oklahoma Medicine, Dr. Charles Robinson Hume, has passed from our Association.

Many honors were bestowed upon this grand and good man, but the one he prized most highly was the Presidency of the Oklahoma State Medical Association, in which capacity he served in 1914-15. As the profession honored Dr. Hume, he in turn honored the profession while he served as an official. During this time there was harmony in the association led by this man who played no tricks but was fair in his judgment and held the good of organized medicine to be the goal of his administration.

Those of us who knew him through the many years will miss his association and we now honor him for a long life well spent in the service of mankind in general and the medical profession in particular.

• THE PRESIDENT'S PAGE •

As of September 10, four hundred and ninety members of the Oklahoma State Medical Association had not returned an answer to the recent communication from the Oklahoma State Medical Preparedness Committee as to whether or not they had answered the questionnaire of the American Medical Association on Medical Preparedness.

The communication from the O. S. M. A. was marked in red ink, "Important", and a self-addressed postal card, postage paid, and with only a check mark necessary for an answer, was enclosed and available for the member's use. Four questions were asked: "Questionnaire not received, please mail me one;" "Questionnaire mislaid, please mail me another;" "I have answered and mailed questionnaire;" and "I am writing committee for further information." Can it be that there are 490 members of the Oklahoma State Medical Association who do not believe in Medical Preparedness? The letter and the questionnaire state that the information is confidential. Answering the questionnaire DOES NOT enlist one in the military forces of the United States.

A natural question asked by many has been, "Just what is the reason for the questionnaire?" The answer to this question is that war today is total. Curative medicine and public health for the civilian population, together with medical education, will be as important as medicine and surgery in military maneuvers. The results of the survey will be used to determine the extent to which American Medicine can answer the demand placed upon it in all fields.

Every doctor must remember that this is not a regimentation measure, but a democratic and voluntary one. While the program may not be perfect in every detail or agreeable to everyone in many of its inquiries, it is nevertheless the effort of a free and progressive profession striving to do of its own accord that which in many another country would be done by force.

Henry N Turner

President.

ASSOCIATION ACTIVITIES

State Committee on Medical Preparedness Established

Further organization of the state's medical preparedness activities in cooperation with the medical preparedness program of the American Medical Association has been effected during the past month with the establishment of an Oklahoma State Medical Preparedness Committee and the appointment of committee members to represent their respective localities over the state.

Named by Dr. Henry H. Turner, Chairman of the committee, to serve as Vice-Chairman was Dr. L. S. Willour, McAlester. Dr. Turner's appointments of physicians to represent the councilor districts in providing detailed correlation of medical preparedness work over the state are as follows:

Councilor district one, Dr. John L. Day, Supply; district two, Dr. J. M. Bonham, Hobart; district three, Dr. J. M. Watson, Enid; district four, Dr. R. M. Howard, Oklahoma City; district five, Dr. James L. Patterson, Duncan; district six, Dr. W. Albert Cook, Tulsa; district seven, Dr. Robert M. Anderson, Shawnee; district eight, Dr. F. L. Wormington, Miami; district nine, Dr. J. M. Harris, Wilburton; district ten, Dr. John A. Haynie, Durant. To round out the state committee, three physicians have accepted appointment to the committee in an advisory capacity. They are: Dr. G. F. Mathews, in the field of public health; Dr. Robert U. Patterson, field of medical education; and Dr. Louis H. Ritzhaupt, field of army requirements.

In an effort to make Oklahoma's part in the national program as complete and efficient as possible, presidents of the various county medical societies were requested by Dr. Turner to appoint a member of their societies to handle preparedness activities in their respective counties. At press time, all but seventeen of these appointments had been received in the Executive Offices. The county chairmen who have been appointed are:

Atoka-Coal: J. S. Fulton, Atoka; Bryan: R. E. Sawyer, Durant; Caddo: Odis A. Cook, Anadarko; Canadian: J. T. Phelps, El Reno; Carter: F. W. Boadway, Ardmore; Cherokee; J. S. Allison, Tahlequah; Choctaw: E. A. Johnson, Hugo; Cleveland: W. T. Mayfield, Norman.

Comanche: Fred W. Hammond, Lawton; Cotton: M. A. Jones, Walters; Creek: G. C. Croston, Sapulpa; Garfield: John R. Walker, Enid; Garvin: John R. Callaway, Pauls Valley; Grady: L. E. Woods, Chickasha; Greer: J. B. Hollis, Mangum; Harmon: S. W. Hopkins, Hollis; Hughes: A. L. Davenport, Holdenville.

Jackson: E. S. Crow, Olustee; Jefferson: L. L. Wade, Ryan; Kay: L. H. Becker, Blackwell; Lincoln: John S. Rollins, Prague; McClain: W. C. McCurdy, Purcell; McCurtain: W. B. McCaskill, Idabel; McIntosh: D. E. Little Eufaula; Marshall: J. L. Holland, Madill; Murray: Paul V. Annadown, Sulphur; Muskogee: H. T. Ballantine, Muskogee.

Noble: T. F. Renfrow, Billings; Okfuskee: A. S. Melton, Okemah; Oklahoma: Horace Reed, Oklahoma City; Ottawa: F. L. Wormington, Miami; Pawnee: R. E. Jones, Pawnee; Payne: R. E. Waggoner, Stillwater; Pittsburg: R. K. Pemberton, McAlester; Pontotoc: M. M. Webster, Ada; Pushmataha: D. W. Connally, Antlers.

Stephens: W. S. Ivy, Duncan; Texas: R. B. Hayes, Guymon; Tulsa: James L. Miner, Tulsa; Wagoner: J. H. Plunkett, Wagoner; Washington-Nowata: J. V. Athey, Bartlesville; Washita: A. H. Bungardt, Cordell; Woods: O. E. Templin, Alva; Woodward: John L. Day, Supply.

Record Attendance Expected At Clinical Society Conference

Marked by the appearance of seventeen guest lecturers, all outstanding physicians in their respective fields, the fall clinical conference of the Oklahoma City Clinical Society is expected to attract a record attendance for its tenth annual program opening in Oklahoma City October 28. The conference, which yearly is gaining widespread national attention will continue through October 31, with a full schedule each day of general assemblies, post graduate courses, and entertainment features.

The appearence of Dr. Nathan B. Van Etten, President of the American Medical Association, will be a highlight of the four-day conference. Dr. Van Etten will be feted by the Oklahoma County Medical Association at a banquet on Monday night, October 28, when he will address members of the county society and their guests, members of the Oklahoma City Clinical Society. Other interesting guests on the roster of lecturers will be Dr. Francis M. Pottenger, tuberculosis specialist of Monrovia, Calif., and Dr. Ernest Sachs, neurological surgeon of St. Louis, Mo., both of whom appeared as guest speakers during the course of the first annual conference of the clinical society in 1930.

While attendance records last year soared to new heights, members this year are making arrangements for the largest in the ten-year history of the conference —this, in view of the pre-conference enthusiasm already being aired. As at the 1939 session, associate members will be here from all parts of Oklahoma, Kansas, New Mexico, Colorado, Missouri, Arkansas, Louisiana, and from as far distant localities as Wyoming, California, Arizona, Philadelphia, and Rochester, N. Y.

Tuesday night, October 29, will be featured by a dinner and dance at the Chamber of Commerce, with visiting doctors and their wives as guests. The annual popular and well-known stag party has been scheduled for Wednesday night, October 30, at the Oklahoma Club.

Wives accompanying their husbands to the conference will not lack for entertainment, as a daily round of entertainment features is being planned by the Women's Auxiliary of the county medical association.

All sessions and commercial exhibits will be at the Biltmore Hotel. A complete list of guest speakers will be found on the cover of The Journal, and additional information may be learned by corresponding with the clinical society secretary, 512 Medical Arts Building, Oklahoma City.

Two State Doctors Certified By Internal Medicine Board

Two Oklahoma physicians have been certified as specialists in internal medicine by the American Board of Internal Medicine following the Board's examinations in April and June, according to a communication from Dr. William A. Werrell, Assistant Secretary-Treasurer, Madison, Wis.

Notices of certificates were issued to Dr. Bert F. Keltz of Oklahoma City, who was certified in April, and to Dr. W. Turner Bynum of Chickasha, certified June 11. Dr. Bynum is the youngest doctor in the United States to receive the designation by the Board.

Pediatrics Course Opens This Month in Fourth Circuit

Announcement has just been made for opening the Post Graduate Pediatrics course to physicians of the fourth Pediatrics circuit. The counties to be covered by this fourth circuit will be Kay, Osage, Noble, Pawnee, Payne, and Creek. The tentative teaching centers will be: In Kay County, Ponca City, Blackwell, and Tonkawa; Pawhuska; Pawnee; in Payne County, Stillwater and Cushing; and in Creek County, Bristow and Sapulpa.

Instruction will begin the week of September 23, and continue for ten weeks. Dr. James G. Hughes of Memphis, Tennessee, opens his course with the first lecture in a discussion of the upper respiratory tract infections, and includes in his discussions rhinitis, pharyngitis, otitis media, acute cervical lymphadenitis, retropharyngeal abscess, peritonsillar abscess, acute sinusitis. He discusses thoroughly the latest developments in the clinical use of sulfanilamide, sulfapyridine, sulfathiazol and sulfamethylthiazol, with the dosages indicated for children, their toxic reactions, and management of all such cases.

Physicians of southeastern and east central Oklahoma through the warm spring and summer months manifested unusual interest in this course in Pediatrics by Doctor Hughes, as indicated by the high percentage of attendance in all groups. The free and private consultation privilege has been utilized by physicians registered in the course in all sections of the present and past teaching circuits. In the present circuit, the reports show a total of 205 consultations during the first six weeks of instruction.

The first lecture should be of interest to physicians in view of the coming fall and winter months with the increasing respiratory problems among children.

This course is sponsored by the Oklahoma State Medical Association, with the financial assistance of the Commonwealth Fund of New York, and the Oklahoma State Health Department. It is open to all ethical and legal medical practitioners.

The Oklahoma report and exhibit in the Scientific Section of the American Medical Association in New York in June attracted widespread attention of delegates and medical association officials from many states.

Dr. James Smith of Ardmore has been appointed secretary-treasurer of the Carter County Medical Society to fill the unexpired term of Dr. W. Doak Blassingame, Dr. J. Hoyle Carlock, president of the society, has announced. Dr. Blassingame has moved to Denison, Texas, to continue his practice.

Medical Licensure Report for State Is Given

Forty-seven candidates, the number examined, passed the written examination for medical licensure in Oklahoma City June 5-6, it has been announced by Dr. James D. Osborn, Jr., Secretary of the Oklahoma State Board of Medical Examiners.

Twenty-four physicians were licensed by reciprocity, and two physicians were licensed by endorsement.

Schools represented by those licensed by reciprocity, the year of graduation of the candidate, and the state with whom reciprocity is made are, in order, as follows:

University of Arkansas School of Medicine, (1937, 2), (1939), Arkansas; Northwestern University Medical School, (1932), Kansas; Rush Medical College, (1936), Illinois; Tulane University of Louisiana School of Medicine, (1932) Mississippi, (1938) Louisiana; Washington University School of Medicine, (1939) Missouri; University of Nebraska College of Medicine, (1928), Tennessee; Duke University of Medicine, (1936), California; Western Reserve University School of Medicine, (1935), Ohio; University of Oklahoma School of Medicine, (1937), Colorado.

Hahnemann Med. College and Hospital of Philadelphia, (1937), Pennsylvania; Jefferson Medical College of Philadelphia, (1915), Virginia; University of Pennsylvania School of Medicine, (1931), Mississippi; Meharry Medical College, (1938), (1939) Tennessee; Univ. of Tennessee College of Medicine (1927), (1938), Tennessee; Vanderbilt University School of Medicine, (1938), Tennessee; Baylor University College of Medicine, (1937), Texas; University of Wisconsin Medical School, (1936), Wisconsin; University of Western Ontario Medical School, (1936), (1938), North Dakota.

The two candidates licensed by endorsement, both carrying the endorsement of the National Board of Medical Examiners, represented the University of Minnesota Medical School (1934), and the University of Nebraska College of Medicine (1928) respectively.

Location Available at Ada

Mr. Lowry Harrell, formerly a member of the Board of Regents of the University of Oklahoma, is authority for the statement that there is a vacancy for a Resident in the Valley View Hospital at Ada, Pontotoc County.

The Valley View Hospital has accommodations for about 75 patients and is a general hospital. The salary is $100 per month plus room, board, laundry, and other necessary expenses. To be eligible, an applicant must have had at least two years of previous hospital experience in an approved institution.

Any physician interested should make a written application for the position to The Commonwealth Fund, 41 East 57th Street, New York City, and also personally contact Mr. Harrell at Ada.

DR. WHITE'S SANITARIUM

NERVOUS AND MENTAL DISORDERS; ALCOHOLISM AND DRUG ADDICTIONS

Wichita Falls, Texas

M. W. CASKEY, Ph.D., M.D.
Medical Director

GUY V. TAYLOR
Business Manager

Modern fire-proof building. All latest methods of diagnosis and treatment.

News From The State Health Department

Oklahoma is getting results from the State Health department's program of education for better health, immunization against communicable diseases and improved sanitation.

A report published this week by the United States Public Health Service shows that the death rate for Oklahoma has decreased during the past year, and the death rate from all but one of the communicable diseases such as typhoid fever and smallpox has also decreased.

Oklahoma's reduction is more significant in view of this quotation from the Public Health Service report: The states reporting a higher death rate in 1940 than in 1939 were all in the south or west." The report covers the first three months of 1940, but "it is believed that the trend of mortality within each state is correctly represented."

The figures giving the death rate, or number of deaths for each 1,000 population, show the value of the public health work being done by the State Health Department, with the cooperation of the medical profession.

During the 1940 period the total death rate in Oklahoma was 9.2 per 1,000, while for a similar period in 1939 it was 9.5. The infant death rate, including children up to one year of age, was 54 per 1,000 births, while in 1939 the rate was 63, representing a decrease of 14 per cent.

Maternal mortality also showed a significant decrease, from 4.1 per 1,000 to 3.5.

Public health does much of its work with mothers and infants, carrying on a complete program for their safety and proper care.

Significant reductions in the number of deaths from diseases which are classified as preventable are shown in the report. In such diseases the State Health Department, through its local or county health department carries on a program of immunization or protection, education, quarantine and removal of the cause of the illness.

Typhoid fever, which has plagued Oklahoma in past years, showed a decrease of from 2.2 to 1.1 deaths per 100,000 population. This disease, having been reduced by half in a year, based on this study, will soon be brought completely under control.

Measles and scarlet fever, troublesome childhood diseases, were reduced from 6 to .3 and from 1.6 to .5 respectively, these figures representing cases for each 100,000 population.

Pneumonia showed a gratifying decrease, from 118.3 to 97.2 and diarrhea and enteritis in children under two years of age decreased from a rate of 4.1 to 2.6.

Other similar diseases showed decreases in prevalence, while illnesses such as cancer, diabetes, tuberculosis, heart disease and adult diseases showed slight increases.

The lone preventable disease which showed an increase was diphtheria. Oklahoma had 25 deaths from diphtheria during the first quarter of 1940, to earn a rate of 4.3 per 100,000 population, compared with a rate of 3.3 in 1939.

Of the 25 deaths, the significant fact is that 16 were in counties having no full-time local health departments, while only nine were reported in counties where public health's full program is underway.

A study of the diphtheria death rate points conclusively to the value of public health as a means of improving health conditions. The 29 counties having full-time local health departments have over half of the state's population, yet had only nine diphtheria deaths, or 3.09 per 100,000 population.

The remaining counties, with less than half of the state's population, had 16 diphtheria deaths and a rate of 5.53. No full-time, organized health program was in effect to prevent occurrence of the disease in those areas.

Several changes in the administrative staff of the Oklahoma State Health Department have been announced by Dr. G. F. Mathews, Commissioner.

Special courses in public health are being taken by several department officers, making the changes necessary, it was explained.

The dental division has a new, temporary director in Dr. R. F. Erdman. Doctor Erdman joined the department on May 1 as assistant director, after completing a special course in dental public health at the Michigan University School of Public Health. He is a graduate of the Northwestern University Dental School, Chicago.

Doctor Frank P. Bertram, director of this division, has gone to Harvard University for an academic year of study in the School of Public Health, where he will work on his degree of Master of Public Health.

In the Venereal Disease Control department, Dr. Eugene A. Gillis has relieved Dr. Vance F. Morgan as director. Doctor Gillis has been epidemologist with the State Health Department. Doctor Morgan is taking a nine-month course in venereal disease control at the Johns Hopkins University School of Public Health, Baltimore, Maryland.

Dr. John Y. Battenfield has been changed from the Venereal Disease Control division to the post of epidemiologist.

Dr. J. T. Bell has succeeded Dr. Paul J. Collopy as director of the Department of Maternal and Child Health. With the health department four years, Doctor Bell was Director of Cooperative District Number Four, stationed at Woodward, before coming to the state office.

Doctor Collopy resigned to take a position as resident orthopedic surgeon, Children's Hospital, Seattle, Washington. He was with the health department four years, as Director of the Maternal and Child Health Department.

University of Oklahoma School of Medicine

A special department dealing with cardiac diseases in children has been established in the Crippled Children's Hospital of the University of Oklahoma School of Medicine. Eight (8) beds have been reserved in the wards of the hospital for cases of this kind and an Outpatient Clinic is held every Wednesday morning for heart cases.

Last June a special ward with a capacity of twenty (20) beds for the reception of colored children under twelve years of age was open in the Crippled Children's Hospital. Beds for adult colored men and women are reserved in the University Hospital. All colored children, when beds are available, are admitted to the Crippled Children's Hospital.

Dr. Berry Campbell, Assistant Professor of Anatomy, is on leave of absence for one year on a Guggenheim Fellowship. Dr. Russell L. Moseley, formerly of the Neurological Institute of Northwestern University Medical School, Chicago, Illinois, has been appointed Assistant Professor of Anatomy ad interim.

Miss Dorothy Omundson from the University of Washington has been appointed Research Fellow in the Department of Bacteriology.

Mr. Charles B. Broeg from the Oklahoma A. and M. College, Stillwater, has been appointed Research Assistant in the Department of Biochemistry.

NEW BOOKS

NEW AND NONOFFICIAL REMEDIES, a publication of the Council on Pharmacy and Chemistry of the American Medical Association. Pp. 656; Chicago: American Medical Association, 1940.

"New and Nonofficial Remedies" contains listings and descriptions of the articles that stand accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1 of the year of publication.

The descriptions of accepted articles are based in part on investigations made by, or under the direction of the Council and in part on evidence or information supplied by the manufacturer or his agents. Statements made by those commercially interested are examined critically and admitted only when they are supported by other evidence or when they conform to known facts.

The grouping together of articles having similar composition or actions is continued in this edition, each group being preceded by a general discussion. These general articles have been revised when necessary to bring them up to date.

During the year 1940 descriptions of such other medicinal substances as are accepted by the Council for New and Nonofficial Remedies will be published from time to time in The Journal of the A. M. A., and will be reprinted in the form of supplements, which will be sent to those who purchase this book.

Besides a general index and an index to distributors, sixty-eight pages in the back of the book make up a bibliographical index to proprietary and unofficial articles not included in New and Nonofficial Remedies.

Group Hospital Service News

GROUP HOSPITAL SERVICE MARCHES ON

Progress of Non-Profit Free-Choice Hospital Service Plans:

DATE	NO. OF PLANS	ENROLLMENT
January 1, 1933	1	2,000 Estimated
July 1, 1933	5	6,000 Estimated
July 1, 1934	9	26,000 Estimated
July 1, 1935	12	97,000 Estimated
July 1, 1936	24	370,000 Estimated
July 1, 1937	33	970,000 Estimated
January 1, 1938	38	1,360,000 Estimated
July 1, 1938	41	1,950,000 Estimated
January 1, 1939	48	2,870,000 Estimated
July 1, 1939	56	4,030,000 Estimated
January 1, 1940	60	4,500,000 Estimated
September 1, 1940	61	6,000,000 Estimated

Our plan is No. 61, but it did not contribute that additional 1,500,000 members. It has, however, through over 100 firms and organizations, extended protection to 8,000 of our citizens, and its steady growth continues. It has paid 105 hospital bills. These members were provided 471 days of hospital care. The average stay per case was 5 4/10 days.

In this accomplishment, our plan has somewhat exceeded the Missouri Plan, the principles of which it adopted, and which in four years has attained commendable success. The comparison is made with recognition of this attainment and is employed merely to measure our own progress.

Four years ago, the American public did not enjoy its present knowledge of this program—its principles and community resources. But we cannot coast on the educational work of others in the past. An educational

Here, my young friends, have a stick of Chewing Gum.
Thank you, Doctor. Everyone in our family likes to chew gum.
How more and more Doctors are building good will the
CHEWING GUM WAY
You naturally want children to feel that you are their friend. One sure, inexpensive way to gain their good will and friendship is to offer them a stick of wholesome Chewing Gum.
Today many physicians everywhere are using Chewing Gum as a good will builder in their offices. It's a delightful pastime that's beneficial and wholesome. Offer Chewing Gum to your young patients today.
The National Association of Chewing Gum Manufacturers, Rosebank, Staten Island, New York

program demanding action by every professional man stands between us and our goal. Commercial, competitive forces—some acceptable—some deplorable, lack of public knowledge and other deterring influences have arisen to confuse and retard. Those influences must be removed.

There are those in Oklahoma who innocently believe and passively accept Group Hospital Service as "just another plan." They accept it as an endeavor that has been blessed with the approval of the Oklahoma State Medical and the Oklahoma State Hospital Associations. This knowledge should be increased to a realization that Group Hospital Service of Oklahoma was inaugurated by the Oklahoma State Medical Association and the Oklahoma State Hospital Association. Members of these Associations, with the assistance of the lay people, operate and manage Group Hospital Service. It is a plan by the people of Oklahoma for the people of Oklahoma. And these factors provide the basis for our educational work.

Every principle of this plan respects the rights and privileges of the professional man. Only a few plans have exercised such care and precaution. The doctors, too, have exercised care and respect for the plan in caring for their patients. This is reflected in the average hospital stay of only 5 4/10 days. Many plans are having to plead for this respect and protection. The Oklahoma Plan should and must always enjoy this distinction.

The American Hospital Association in Chicago has frequently answered inquiries from industrial firms with the statement that the united support of the State Medical Association is sufficient to make Group Hospital Service here financially sound and insure its success. That Association requested 100 copies of the "President's Page" from our July issue and forwarded them with a complimentary letter to all plan executives in the United States.

Truly, "The eyes of the country are upon us." We have launched our ship—let us spread its sail. We are in an enviable position—let us maintain it. We can talk Group Hospital Service to our patients, our friends and associates. They are interested—they appreciate this knowledge and advice. No one can tell when he will be sick or what his sickness will cost him. Hospitalization is unpredictable; it requires absence from gainful employment and it is usually accompanied by other expenses for professional service. Consequently, the hospital bill is peculiarly an economic hazard, and hospital bills have been difficult to pay.

Group budgeting of hospital care, by which individuals "prepay" the necessary cost of hospitalization is a way to remove this economic hazard from the sick individual and his family. It is not merely an idea, but an accomplished fact.

Our plan was founded on principles evolved from over a decade of experience. The experiences and accomplishments in extending protection to 6,000,000 people give evidence of sound practices and the ability to meet social and contractual obligations to members and hospitals.

As a pioneer in the health field, the non-profit plan has developed community consciousness to a point of civic proprietorship.

It tends to preserve for health professions and institutions the duty and privilege of caring for and healing our sick, wounded and afflicted. It encourages scientific research and progress in the health field; discourages governmental interference and regimentation of our cherished health facilities.

Dr. J. H. Coogan, who has served as physician for the Quapaw Indian Agency, with headquarters in Miami, for the last year, has left for Carson, Nev., where he will practice under another agency. Dr. Coogan was a member of the Ottawa County Medical Society. He is being succeeded by Dr. Louis N. Dakil of Pottawatomie, Kan.

• OBITUARIES •

Dr. Charles Robinson Hume
1847-1940

Death closed the pages on a long life of distinguished service in both medical and lay activities when it came to Dr. Charles Robinson Hume, Anadarko pioneer, August 9, in his 92nd year. Dr. Hume died at the home of a son, C. Ross Hume, in Anadarko, after he had been bedfast for nearly a year.

A former president of the Oklahoma State Medical Association, and an honorary member in late years, Dr. Hume had lived in Anadarko for nearly 50 years, and with his death, memories of service to the entire Kiowa Indian reservation are revived in the minds of aged Indians and whites alike. For the first five years of his practice in the five-county area, the physician gave medical aid to the Indians without any assistance.

Doctor Hume was born in Riga, Monroe County, New York, on October 21, 1847, and moved with his parents to Michigan in 1854. Twenty years later he was awarded his degree in medicine from the University of Michigan. His first practice was begun in Wood County, Ohio, and he was married to Annette Ross, December 27, 1876, in Perrysburg, Ohio. Following the Perrysburg medical practice, the couple moved to Tontogany, Ohio, where two sons, C. Ross and Raymond R., were born. In January, 1881, the family moved to Caldwell, Kansas, where Doctor Hume remained until 1890. During their Caldwell residence, two sons and a daughter were born and died in infancy.

Appointment as Kiowa Indian Agency doctor brought Dr. Hume to Caddo County on December 1, 1890, and his family followed a month later. Mrs. Hume died in January, 1933, and Dr. Raymond R. Hume died in Minco in August, 1935.

Dr. Hume was the oldest living member in continuous affiliation with the Anadarko Presbyterian church, establishing his membership in 1891. Until retiring from his position ten years ago, Dr. Hume served as either a trustee or elder of the church from his time of membership. A charter member of the Sons of the American Revolution in the state chapter at Oklahoma City, the physician was given honorary membership when he retired at the age of 80.

At the organization of Caddo County, he was appointed as first county health officer, holding the position until statehood. He was the first president of the Caddo County Medical Society, and for many years was secretary-treasurer of the organization. He was Councilor for the third district of the State Association for six years, and in 1914 was made vice-president. He served as president in 1916.

Included in the survivors are his son, C. Ross Hume, Anadarko; three grandchildren, Ross G. Hume, of Oklahoma City, Mrs. James H. Hammond of Tulsa, and Mrs. John R. Black of Los Angeles, Calif.; and two great-grandchildren, Charles Robert Hume of Oklahoma City, and James H. Hammond II.

Funeral services were conducted from the First Presbyterian Church in Anadarko August 11, with the Rev. Lewis R. Rogers officiating. Interment was in the Anadarko cemetery.

Dr. John Archer Hatchett
1853-1940

Many years of active service in the practice of medicine came to a close for one of the state's best-known physicians Friday morning, August 16, when Dr. John Archer Hatchett, beloved longtime member of the profession, succumbed to an extended illness at his home in Oklahoma City.

Dr. Hatchett, who was 87 years of age at the time

STUDIES IN THE AVITAMINOSES

This page is the ninth of a series on vitamin deficiencies presented by the research division of The Upjohn Company because of the profession's widespread interest in the subject. A full color, two-page insert on the same subject appears in the August 17 issue of The Journal of the American Medical Association.

Casal's collar in a patient with advanced pellagra secondary to chronic alcoholism.

Illustration courtesy of Virgil P. W. Sydenstricker, M.D., University of Georgia Medical School, Augusta.

The scaling symmetrical pellagrous dermatitis of the hands.

The Dermatitis of Pellagra

The severe scaling dermatitis of the hands seen in most cases of advanced pellagra is pathologically identical with skin lesions developing elsewhere on the body surface. Microscopically, thickening of the skin, lymphocytic infiltration of the dermis, and hyaline degeneration of the intima of the smaller arterioles are observed. The early clinical changes consist of burning, tenderness, erythema, pigmentation, and mild vesiculation. The acute character of the eruption disappears after a variable period but if no treatment is instituted, the pigmentation becomes more intense and the scaling and desquamation more severe. As with other pellagrous skin lesions, the dermatitis of the hands is bilateral and symmetrical, and is sharply demarcated from the adjacent normal skin.

The dermatitis which frequently appears on the neck is known as Casal's collar. The lesion assumes its peculiar distribution because of the provocative action of sunlight upon the skin of pellagrins. The neck, exposed to the influence of sunlight, is thus frequently the site of the pellagrous dermatitis. However, unexposed portions of the skin, notably the upper thighs and perineum, may become similarly involved.

UPJOHN

of death, remained active in medical practice until only about a year ago, when he retired.

A pioneer El Reno physician, Dr. Hatchett lived in that city from 1891 until 1920, when he moved to Oklahoma City to continue his practice. When in El Reno, he organized the El Reno Sanitarium, and was associated with Dr. T. M. Aderhold in the operation of the hospital until his retirement from the partnership and his moving to Oklahoma City in 1920. In El Reno, he served as president of the El Reno State Bank, which later was merged with the Citizens National Bank.

In 1902, the El Reno Sanitarium organized the first nurses' training school in Oklahoma, and during his connection with the institution, Dr. Hatchett was one of the instructors. During his early days in Canadian County while ministering to the needs of the pioneer citizens, many of whom were in extreme want, Dr. Hatchett rode a saddle horse, Dick to make his rounds. On the death of the equine, he resorted to a buggy for his trips until the autos came into general use.

Dr. Hatchett was a graduate of the Missouri Medical College, St. Louis, receiving his degree in 1884. He was widely known in medical circles over the state, and at the time of death was professor emeritus of obstetrics at the University of Oklahoma School of Medicine, having been a member of the faculty for many years. During his residency in Oklahoma City, he served at one time as President of the Oklahoma County Medical Association, and in 1933 was elected to membership in the Oklahoma Memorial Association Hall of Fame as one of the early Oklahoma physicians who contributed much to the advancement of his profession. In recent years he was honored with honorary membership in the State Medical Association.

Immediate survivors are his wife of the home in Oklahoma City; a son, Ray Hatchett of Oklahoma City; and two daughters, Mrs. C. E. Clymer and Mrs. P. P. Duffy, both of Oklahoma City.

Funeral services were conducted from the chapel of the Garrison Funeral home in El Reno on Sunday afternoon, August 18, with the Rev. M. B. Pringle, pastor of the First Christian Church in El Reno, officiating. Interment was in the El Reno cemetery, with six Oklahoma City physicians with whom he had been associated serving as pallbearers. They were Dr. Patrick Nagle, Dr. Tom Lowry, Dr. Dick Lowry, Dr. Bert Keltz, Dr. W. W. Wells, and Dr. J. B. Eskridge.

Grants Made For Venereal Disease Control

An allotment of $5,672,388 has been made by the U. S. Public Health Service to the states and territories and the District of Columbia for venereal disease control during the coming year, according to an announcement by the Journal of the American Medical Association.

A special portion of these grants, amounting to $458,600, has been allotted on the basis of the extent of military and national defense industrial concentrations. The remainder will be used to further research in new methods of treatment and diagnosis of syphilis and gonorrhea, for training of personnel, for coordination of educational efforts, and for cooperation with the states in planning and administration of the control program.

Squibb Executive Succumbs at Connecticut Home

Theodore Weicker, Chairman of the Board of E. R. Squibb and Sons, died at his home in Greenwich, Conn., August 7, in his 80th year.

Funeral services were conducted Friday, August 9, at the Riverside Church, Riverside Drive and 122nd Street, New York City.

Mr. Weicker was born in Darmstadt, Germany in 1861. Upon graduation from school, he joined the old German house of E. Merck, advancing to an executive position in a few years. In 1882, he went to London, becoming associated with a general export house where he took charge of the development of its foreign business.

In 1887, he sailed for New York to make his career, and acquired citizenship in the shortest time provided by law. At his insistence, the firm of Merck & Co., discarding a two-hundred-year-old tradition, established a branch in this country. Mr. Weicker became partner in the American enterprise and remained as managing partner of the New York branch of Merck & Co. for fifteen years.

In 1905, following the death of Dr. Edward R. Squibb, founder of the House of Squibb, Mr. Weicker joined with the late Lowell M. Palmer, a leading capitalist, to buy and preserve the name of E. R. Squibb & Sons. Bringing with him a keen commercial talent and business imagination, Mr. Weicker was responsible for the large growth of the Squibb Company.

He conceived the idea of extending to the general public, under strict professional supervision, information previously available only to a discerning few. Mr. Weicker proposed to reach this objective through general advertising, and he put forth an educational plan to make known to the broad public the name and ideals of his House through the advertising pages of the public press.

Doctors Needed For CCC Service

Physicians are needed for the medical service of the Civilian Conservation Corps, according to the Surgeon of the Seventh Corps Area.

The initial salary is $3,200 a year. No quarters are provided for families, and the physicians are required to pay for their own food at camps. Temporary quarters for physicians are provided at the camps for a nominal fee. Those selected must pay their travel expenses to the headquarters of the district, where they are placed on temporary duty before being sent to camp. The principal duties at camps consist of the medical care of the enrollees and the practice of preventive medicine.

Eligibility requirements are that the physician must be a citizen of the United States, a graduate of an accredited medical school, licensed to practice medicine and physically able to perform the duties. Physicians over 60 years of age are not ordinarily employed.

Those interested are requested to submit applications placed on temporary duty before being sent to camp. to the Office of the Surgeon, Headquarters, Eighth Corps Area, Fort Sam Houston, Texas, giving date on which available and preference of assignment in the following states.

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Cancer Society's Poster Contest Attracts Many Entrants

Hundreds of letters have been received from artists asking for information on the poster contest which the National Alliance of Art and Industry, Inc., is sponsoring for prizes offered by the American Society for the Control of Cancer, according to the National Bulletin of the Society. Requests for entrance blanks have come from every state in the union.

The purpose of the contest is to secure a poster, or group of posters, which will dramatize the fight against cancer, the Bulletin said. According to the rules, posters are to be drawn "to stimulate public interest in the control of cancer, to further the support for the educational movement, to encourage endowment for research, and to deliver a hopeful message to a public to which the very word cancer spells fear." Posters will be received from October 1 to 12 by the National Alliance of Art and Industry, Inc., and will be judged on October 14.

Prizes total $1,875 and will be awarded by a jury of artists, publicists, and scientists, headed by Harvey Wiley Corbett, N. A., former president of the Architectural League of New York. The first prize is $1,000 and the winning posters will be used in the 1941 campaign of the Women's Field Army. There is a second prize of $500, a third of $250, a fourth of $50, a fifth of $25, and four of $10. All winning posters become the property of the American Society for the Control of Cancer.

Tobacco Possible Source of Arsenic Poisoning

Tobacco as a possible source of arsenic poisoning is suggested in The Journal of the American Medical Association by E. E. Barksdale, M.D., Danville, Va., who points out that lead arsenate has been used for years by farmers as an insecticide on the plant to kill the horn worm. He presents a series of cases of skin rashes, in none of which was it possible to determine any source of arsenic other than tobacco. As result of his findings in a group of patients being treated for syphilis he believes that any person under syphilitic treatment who gets a skin inflammation after injections of arsphenamine should not use tobacco in any form.

Dr. Barksdale says that all of the tobacco on the American market contains arsenic in a form which may be taken up by the human body and that nothing is done during the agricultural or manufacturing process to remove it and that probably nothing can be done.

"Lead arsenate is essential to the tobacco industry," he says. "It should be considered as an industrial hazard. Farmers use it as an insecticide because it is the most efficient and inexpensive one available. Indeed, its efficiency is probably responsible for the fact that it remains on the tobacco when it reaches the consumer. It has the property of sticking to the tobacco. This is the reason why it is so effective. Remaining on it throughout, it kills the young worms as they are hatched. It is impossible to wash it off because in so doing the tobacco would be ruined. There is no chemical process known that will remove it."

In discussing eight cases of arsenical skin inflammation. Dr. Barksdale says: "All the patients were emphatically cautioned against the use of tobacco and they recovered and have remained so since. Three of them have had mild recurrences every time they used tobacco."

He says that it is believed that patients get this dermatitis (skin inflammation) because they have a low point of tolerance to arsenic. "Fortunately, the point of tolerance for arsenic of most persons is much higher than the amount of arsenic that one could consume from tobacco," he adds.

In conclusion Dr. Barksdale carefully points out that: "This paper has attempted to present a theory. Its ultimate proof depends on the collaboration of other workers."

COLLEGE OF PHYSICIANS' 1941 MEETING HEADQUARTERS ANNOUNCED

An announcement has been made that the twenty-fifth annual session of The American College of Physicians will be held in Boston during the week of April 21, 1941.

Headquarters will be at the Hotel Statler. The Executive Offices of the Oklahoma State Medical Association will be glad to make reservations for any of the state physicians planning to attend.

Allergic Disorders Suffered By Many

"In the United States at least 3 per cent of the population is affected by allergy of the upper air passages, but general allergic disorders may affect as many as 60 to 70 per cent." Leon Felerman, M.D., Philadelphia, points out in the September issue of Hygeia, The Health Magazine in a discussion of hay fever.

In classifying allergic persons in four groups, he explains that hay fever victims belong to the inhalant group, the respiratory organs being mainly affected. Other classifications include the ingestant group, in whom certain foods may produce an intolerable itching; the contactant group, who get a rash from coming in contact with such substances as wool, silk or certain cosmetics, and the injectant group, who react to injection of serum.

"Hay fever is not caused by hay, nor is it accompanied by an elevation of body heat," Dr. Felderman observes. However, he says that most of the other names for the condition are likewise misleading, or at least fail to impart precise information on the causative factor. Here are a few of the inadequate synonyms: rose fever, rose cold, perennial hay fever, allergic coryza, hyperesthetic rhinitis, pollen coryza, pollen catarrh, pollinosis, hay asthma, summer catarrh and Heufeber.

"Hay fever plays a devastating role in the earnings of the 5 million victims," the author says. "Those who suffer from this malady annually lose on the average of two to three weeks' time from work, which when multiplied by 5 million is quite an economic loss.

"Hay fever is unheard of among the thick skinned savages, and no sufferer of this malady will begrudge the otherwise benighted heathen this healthy distinction. The condition has a selective affinity for the intelligent sia rather than the brawn worker.

"The pollen causing hay fever can come from flowers trees, grasses and weeds. For the pollen to be an irritant, it must fulfil five postulates: First, there must be present in the pollen an excitant of hay fever. Second, the pollen must be wind borne. Third, the pollen must be present in sufficiently large quantities. Fourth, the size of the pollen grain must be such that it will be sufficiently buoyant to be carried long dstances. Fifth, there must be an abundant growth of the pollen-producing plant of a considerable area.

"A patient who suffers severely may start with preseasonal treatment, which commences two or three months prior to the attack; in a mild case, coseasonal treatment is indicated."

There is also the perennial treatment, Dr. Felderman points out, which is carried on throughout the year ordinarily at intervals of from one to three weeks. "The modern precise concept of hay fever makes it possible to desensitize a patient against pollen or foodstuffs and give him relief from the annoying disorder," he says.

Board Grants 191 Certifications

The American Board of Obstetrics and Gynecology at its examinations held in Atlantic City, N. J., in June granted certification to 191 of its 242 candidates. The next examinations for group B, part I, candidates will be given January 4, 1941, and for group A and group B, part II, at Cleveland in June, 1941, immediately prior to the meeting of the American Medical Association. Applications may be obtained from Dr. Paul Titus, 1015 Highland Building, Pittsburgh (6), Pa.

"CONGESTION DUE TO SMOKING RETURNED WITHIN ONE WEEK in 80% of the cases, on changing back to cigarettes made by the ordinary method!"

The information quoted is from tests reported in Laryngoscope*. While Philip Morris do not claim to cure irritation, here is what the tests revealed: *When smokers with irritation of the nose and throat due to smoking changed to Philip Morris, irritation cleared completely or measurably improved.*

On changing back, congestion returned in 80% of the cases.

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**Feb. 1935, Vol. XLV, No. 2, 149-154*

Journal of A. M. A. Refutes Life Magazine Statement

"In Life, which is a picture magazine, for August 19 appears an article entitled 'Osteopathy's "Cure-By-Manipulation" Is Attacked by Regular Physicians,'" The Journal of the American Medical Association for August 31 states. "Here a small amount of text is supplemented by a number of photographs, evidently made in or supplied through the osteopathic shrine at Kirksville, Mo., known as the Kirksville College of Osteopathy and Surgery. In the very brief text which accompanies the pictures appear a number of misstatements of fact which, it is not too confidently expected, the magazine may correct. Many of these misrepresentations have been repeatedly exposed in The Journal. In the second paragraph of the article, for example, appears this statement:

"'In 33 States qualified doctors of osteopathy are permitted to practice on equal or almost equal footing with doctors of medicine. Osteopaths can and do deliver babies, perform surgery, prescribe drugs and take full charge of patients.

"The facts are that in only four states (Colorado, Massachusetts, New Hampshire and Texas) for certain, and perhaps in a fifth (Kentucky), may osteopaths now legally prescribe or dispense drugs without restriction. This is true in the first four states mentioned because in those states osteopathic applicants, if licensed at all, must meet the requirements exacted of applicants to practice medicine generally. To this list may be added, after November 1, 1941, a sixth state (New Jersey), where osteopaths licensed after that date will be subject to the same requirements as nonsectarian applicants and will receive an unlimited license to practice medicine.

"Experience has shown that few osteopaths indeed are able to meet the requirements exacted of applicants to practice medicine generally. In twelve states osteopaths are given limited right to use certain drugs, the drugs concerned varying in the various states. In eight states osteopathic licentiates generally may not use drugs, but the laws contain provisions whereby osteopaths may, under certain conditions, obtain licenses by virtue of which they may use drugs, the law of one of these states even then permitting the use only of a very limited number of drugs. In eight states osteopaths are specifically denied the right to use drugs. In nine states osteopaths secure licenses only to practice osteopathy, without defining the scope of the practice permitted, but no court has ever held that the right to practice osteopathy includes the right to use drugs. In seven states osteopaths are licensed to practice osteopathy as taught in recognized schools of osteopathy which, in effect, denies them the use of drugs, and the Supreme Court of Kansas has recently held that the right to practice osteopathy as taught and practiced in recognized schools of osteopathy confers no right on osteopaths to practice operative surgery or to use remedial drugs.

"To summarize: In twenty-four states osteopaths legally cannot under any circumstances use drugs. In eight states by far the greatest number of osteopaths cannot use drugs but it is possible for candidates possessing stated qualifications to obtain that right. In twelve states osteopaths may utilize stated drugs to a limited extent. Only in five states, probably, may osteopaths use drugs without restriction. Obviously, then, from the standpoint of the right to use drugs, which an osteopath must possess if he is 'to practice on equal or almost equal footing with doctors of medicine,' the article in Life is, to put it charitably, indulging in gross exaggeration when it states 'In 33 States qualified doctors of osteopathy are permitted to practice on equal or almost equal footing with doctors of medicine.'"

Provisional Death Rates For 1939 Shown

The Bureau of the Census announces that provisional tabulations of deaths in continental United States in 1939 show a crude death rate of 10.7, as compared with 10.6 for 1938. The bureau points out that the apparent increase may be due to the use of the 1938 estimate of population in computing the 1939 rate and that the difference may disappear or be reversed when the new census figures are available.

Rates for individual states are computed on 1937 estimates of population and are therefore higher for some states than they would be if computed on 1939 estimates.

Twenty states show lower crude rates in 1939 than in 1938, twenty-one states and the District of Columbia show higher rates, and seven states show no change, the report said. The greatest decreases occurred in Rhode Island, South Carolina, Georgia, North Carolina, Alabama and Arizona; the largest increases in the District of Columbia, Idaho, Iowa and Montana. The highest rates were for Arizona (14.2 per thousand of population), New Mexico (14.1), District of Columbia (13.2) and Florida (12.8). The lowest rates were for North Dakota (7.7), Oklahoma and South Dakota (8), and Arkansas (8.1).

The report emphasized that differences in crude death rates do not necessarily indicate corresponding differences in health conditions. Age, sex, and racial distributions are factors that affect the crude death rate, and these distributions differ in the various states.

Canadian Medical Association Elects

Dr. Gorden S. Fahrni, Winnipeg, was elected President-Elect of the Canadian Medical Association at the annual meeting in Toronto in June, and Dr. Duncan Graham, Toronto, became President.

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A. M. A's President-Elect Well-Known to Profession

"Perhaps the greatest single attraction in the field of graduate medical education in the United States for a number of years has been Dr. Frank Howard Lahey of Boston, just elected to the position of President-Elect of the American Medical Association, shortly after passing his sixtieth birthday," the Association's Journal says in a recent editorial.

He was born in Haverhill, Mass., on June 1, 1880, and received the degree of doctor of medicine from Harvard University in 1904. After his graduation he served as surgeon in the Long Island Hospital in 1904-1905 and in the Boston City Hospital, 1905-1907, and became resident surgeon of the Haymarket Square Relief Station in 1908 and instructor in surgery in Harvard Medical School, 1908-1909 and from 1912 to 1915. He was assistant professor and later professor of surgery in Tufts Medical School from 1913 to 1917. He also served as professor of clinical surgery in Harvard Medical School in 1923-1924. He has been for some time surgeon in chief of the New England Deaconess and New England Baptist Hospitals and director of surgery in the Lahey Clinic.

During the World War he served as major and also as director of surgery in Evacuation Hospital 30. He is a regent of the International College of Surgeons in Geneva, fellow and a member of the board of governors of the American College of Surgeons and a member of the American Surgical Association and the American Association for the Study of Goiter. His chief literary contribution, in addition to many periodical articles, is the Lahey Clinic number of the Surgical Clinics of North America. He has been a member of the editorial boards of Surgery, Gynecology and Obstetrics and of the New England Journal of Medicine.

In the American Medical Association he was appointed by President Jabez N. Jackson at the Washington session in 1927 as a member of the Council on Scientific Assembly for a term of five years (to end in 1932); he was reappointed for a five year term (to end in 1937) by President E. H. Cary at the New Orleans session in 1932. He was appointed by President Irvin Abell at the San Francisco session in 1938 as a member of the Council on Medical Education and Hospitals for a term of seven years and resigned following his election to the presidency. He was also a member of the Advisory Committee to Cooperate with the Bureau of Medical Economics of the American Medical Association Outlining the Necessary Procedure for Making Studies and Reports of the Prevailing Need for Medical and Preventive Medical Service, later called the Committee on Medical Care), which was established by the Board of Trustees at its February 1938 meeting. He was secretary of the Section on Surgery, 1926-1929, and chairman of the Section on Surgery, 1929-1930.

"It is doubtful that any other surgeon in the United States is more widely known to the medical profession throughout the nation than is Frank Howard Lahey. He has traveled widely and often and has given freely of his time for improving the quality of surgical diagnosis and procedure. He is a proficient speaker and will fill with distinction the new position of leadership which has just been given to him."

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New Inspection Lamp Developed For Cataract Surgery

A new and highly efficient ultra-violet inspection lamp for cataract surgery, developed with the collaboration of Dr. Elliott B. Hague of Buffalo, N. Y., and described in the March 1940, issue of the American Journal of Ophthalmology, Page 317, has been announced by American Optical Company.

The new Hague lamp is a bulb-type, mercury vapor (ultra-violet) lamp with special filter, contained in a parabolic reflector with pistol grip for convenience in manipulating. Its transmission characteristics are such that it projects a full beam of ultra violet light of maximum intensity at 3650 Angstrom units, which, if directed into the eye, will cause the crystalline lens to fluoresce.

The lamp may be used for the following purposes: (1) To identify cortical residue or remnants of capsule following extra-capsular cataract extraction. (2) To visualize the anterior capsule of the lense in intracapsular extraction. (3) To locate dislocated lenses. (4) To recognize fine, superficial, corneal abrasions stained with fluorescein without the use of a corneal microscope or slit lamp. (5) To detect slight lesions of the lid, more or less impereceptible by ordinary light. (6) Other uses are being investigated.

The lamp possesses the following advantages: (1) Safety. Rays produced include practically the useful, nonharmful waves. Biological experiments with rabbits' eyes, human eyes, and human skin have completely confirmed this . (2) Convenience. The lamp is light, compact, portable, easy to hold, and simple to manipulate. In comparison to a carbon arc, it gives a much more uniform and stable illumination. (3) Efficiency. The supply of fluorescing ultra violet is greater than in previous lamps. More intense fluorescence is obtained which makes it possible to use the lamp under general illumination.

Tuberculosis Death Rate Drops

In 1939 there were 61,184 deaths from tuberculosis in the United States as compared with 63,677 in 1938, the Bulletin of the National Tuberculosis Association reports. The death rate dropped from 48.9 per hundred thousand of population in 1938 to 46.6 in 1939.

Except for Delaware, the death rate in all states declined or remained within one decimal point higher than in 1938 figures. The lowest rates were in Nebraska (15.8), Utah (16.8), Iowa (18.5), Idaho (19.7), and North Dakota (20.2). The highest was in Arizona (191), but that was a decline from the 1938 rate of 221.6. The New Mexico rate remained the same, 91.2 for both years. The rate in the District of Columbia declined from 92.2 to 88.3.

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Mental Reactions May Result From Sugar Insuffiency

Some abnormal nervous and mental reactions may be due to a disturbance in the utilization of such carbohydrates as dextrose (sugar) by the brain, G. Wilse Robinson Jr., M.D., and Prior Shelton, M.D., Kansas City, Mo., suggest in The Journal of the American Medical Association. This disturbance, they say, may be the result of an improper functioning of the whole metabolic process (whereby the energy of life is produced in the body).

Their conclusions are contained in a preliminary report of their study of sixty-nine nervous and mental patients. The presence of sugar in the urine does not necessarily indicate diabetes mellitus (insufficient production of insulin with which to utilize sugar), they say.

"The physician in general practice," the two men advise, "should keep this fact in mind when he is consulted by patients who present a symptom complex of 'nervousness,' fatigue and ready exhaustability, vague somatic (body) complaints and the picture that is usually diagnosed 'psychoneurosis.' If evidence of disturbed carbohydrate metabolism is found, a high carbohydrate diet with adequate insulin to insure combustion will be a valuable aid in the treatment program.

"Regardless of its place in the etiologic picture, the dextrose tolerance should be corrected as quickly as possible during the general therapeutic management of the case. Only after improvement of feeling tone and general metabolism can special measures, such as shock and mental treatment, be readily effective.

"The diagnosis of diabetes mellitus in patients with a history of nervous and nervous type conditions must be made with caution, for only after a long period of observation and treatment to correct malnutrition, metabolic disturbances resulting from improper habits, nervous tension states and other factors as yet undetermined can such a diagnosis be made."

Discussing the metabolism of the human organism, the Missouri workers state that with this in mind "it is easy to understand how neurotic, overanxious types, those who suffer from anorexia (loss of appetite) during physical or mental illness may upset their carbohydrate metabolism balance with depletion of reserves, suppression of secretion of body insulin and the development of toxic (poisonous) states from improperly metabolized fats and proteins."

All this, the authors explain, deprives the brain of its only energy-producing food — the sugar resulting from carbohydrate metabolism. The brain does not store dextrose or sugar and therefore a constant and continuous supply of carbohydrate is necessary. "It is certainly not illogical," Drs. Robinson and Shelton point out, "to assume that a disturbed carbohydrate metabolism will disturb the functioning ability of the brain to some degree. Diabetic and diabetic-like curves of circulating sugar in the blood are common in nervous and mental patients." They found such curves in forty-four of the sixty-nine patients.

"We feel," they continue, "that these abnormal curves result from malnutrition. The nervous and mental patient usually goes through a prolonged period before admission (to the hospital) when hygienic habits are poor, diets are improper and various food superstitions are followed. General metabolism is frequently poor.

"We have observed beneficial effect from small doses of insulin (which helps metabolize carbohydrate) and a high carbohydrate intake on various mild mental disorders, chronic alcoholism, and delirium tremens.

"We felt that the basic ability of the organism to utilize dextrose," they conclude, "must be impaired in some way if these stimulations to carbohydrate metabolism brought about improvement in our patients."

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Medical Education Improving, Wide Survey Reveals

Medical education in the United States is constantly improving, the Fortieth Annual Presentation of Educational Data by the Council on Medical Education and Hospitals of the American Medical Association, published in The Journal of the Association for August 31, shows.

Discussing a survey of all medical schools in the United States and Canada, report of which was released last January, the Council says: "Reports received from a large number of medical schools and follow-up inspections of many indicate that, as a result of the Council's survey, substantial improvements have been and are being made. Where facilities were inadequate the size of classes has been reduced, entrance requirements have been raised, the teacher-student ratio in the basic medical science departments in 1939 was 1:8 as compared to 1:11 in 1934, clinical facilities have been improved, budgets have increased and curriculums have been revised."

Additional evidence of the improvements in medical education is contained in the Council's figures on the number of students in and graduates from the seventy-seven medical schools in the United States. Although in 1940 there were thirty-one fewer students enrolled than in 1939 there were eight more graduates in 1940 than in the previous year, reflecting the value of the increasing care being exercised in the selection of students by the schools.

The data in The Journal contain the usual report on preliminary and undergraduate medical education with a description of the approved medical schools and revised lists of hospitals approved for the training of interns and approved for residencies and fellowships in the specialties. A summary of the activities of the various agencies interested in continuation courses for practicing physicians is also given, as well as the Principles Regarding Graduate Medical Schools ratified by the House of Delegates of the American Medical Association at its recent New York session. In addition, there are included the official requirements of each of the fifteen approved examining boards in medical specialties. These data are based on official reports.

Discussing preliminary education, the report says: "The Council's minimum requirement for admission to approved medical schools is two years of college training which include English, and theoretical and practical courses in physics, biology and general and organic chemistry. Three years or more in college is, however, recommended. Since it cannot be generally assumed that all who have satisfied these requirements in terms of hourly credits are fitted for the study of medicine, qualitative standards also are imposed.

"For the session 1939-1940, sixty-six of the seventy-seven medical schools in the United States had a premedical prerequisite in excess of the minimum. For 1940-1941 only nine schools will admit students with less than three years of preparation.

"The general trend toward three or more years of college work would appear to be due to a desire for more thorough grounding in all branches of chemistry and greater familiarity with nonscience subjects, such as literature, history or economics.

"In 1936-1937, 12.5 per cent of the entering class had only the minimum of preliminary education, but by 1938-1939 the number had dropped to 3.8 per cent and in 1939-1940 to 2.0 per cent.

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"With but five exceptions, namely California, Connecticut, Massachusetts, Missouri and Nebraska, the state licensing boards require two years of preliminary college training. The law in Massachusetts will change in 1941. Although the statutes do not include the two year college requirements, these states with the exception of Massachusetts do not license other than graduates of approved schools. Alaska, Hawaii and Puerto Rico likewise require two years of preliminary training."

Sixty-seven medical schools in the United States and nine faculties of medicine of Canada are listed in the report; also ten schools of the basic medical sciences in the United States and one in Canada. All but three of these schools at the present time have the approval of the Council, the three being on probation.

"Medical students enrolled in institutions in the United States and Canada number 24,194, exclusive of 1,152 fifth year students in the United States interning or engaged in research and 132 in Canada interning as a requirement for the degree of Doctor of Medicine or in order to be eligible for licensure," the report says.

"Since July 1, 1939, 5,703 received the degree of Doctor of Medicine, 5,097 from schools in the United States and 606 from Canadian institutions."

The University of Illinois College of Medicine, with awards of 162 diplomas, granted the greatest number of degrees. The Woman's Medical College of Pennsylvania, with 18, graduated the lowest number. Twenty-three schools granted degrees to classes of fewer than fifty students, thirty-three schools graduated between fifty-one and 100 each, seventeen from 101 to 150 and three less than 200 but more than 150.

Discussing birthplace of students, the Council says: "The greatest number of students registered, 2,776, according to state of birth, was from New York, followed by Pennsylvania with 1,867, Illinois with 1,356 and Ohio with 1,068.

"Foreign born students were matriculated in sixty-eight of the seventy-seven medical schools in the United States. There were 511 so enrolled, of whom thirty-two each were studying at the College of Medical Evangelists, Los Angeles, and the University of Illinois College of Medicine, twenty-five at New York University College of Medicine and twenty-four at Harvard Medical School. Other schools registered fewer than sixteen. It may be presumed that many of these are now citizens of the United States"

Medical schools are located in thirty-six states and the District of Columbia, the report says. Nine are located in the State of New York, which naturally had the greatest number of students and graduates, 2,589 and 597 respectively. Pennsylvania with six schools had 2,337 students and 569 graduates; Illinois with five schools, 1,979 students and 574 graduates ranked third, while Massachusetts with three schools, 1,113 students and 282 graduates completes the group of states having an enrolment of more than 1,000, although California with four schools had 999 students and 259 graduates.

"Twelve schools in the United States and three in Canada require an internship for graduation," the Council reports. "Several medical schools accept research or other clinical work in lieu of hospital service.

"The medical licensing boards of twenty-two states, the District of Columbia, Alaska, Hawaii and Puerto Rico require that all candidates for licensure possess a hospital internship. The first state to adopt this requirement was Pennsylvania in 1914. In addition, other states exact the internship of graduates of faculties of medicine abroad and of applicants for reciprocity or endorsement. Some of the medical schools and licensing boards have their own list of hospitals acceptable for intern training but the Council's approved list is generally in use.

"There were 1,152 students in the United States and 132 in Canada reported as completing the fifth or intern year requirement of the medical schools which exact the fulfillment of the internship as requisite for the M.D. degree. In addition, statistics computed indicate that 98 per cent of the graduates of recent years have obtained or are obtaining this added experience."

In a discussion of this phase of medical education, The Journal, in an editorial in the same issue, says: "The internship is an established institution in this country, mutually profitable to both hospitals and interns. Each year more hospitals seek the privilege of instructing interns. Even in those states in which an internship is not legally required for licensure, practically all medical graduates voluntarily serve this form of apprenticeship. The merits of 'straight,' 'mixed' and 'rotating' internships are still debated; probably all of these types are desirable and no one of them should be adopted to the exclusion of others."

Referring to an article on "Responsibility for Choosing Interns and Internships," by William Dock, M.D., San Francisco, in the same issue of The Journal, the editorial says that Dr. Dock "argues that medical students should secure intern appointments largely through their own efforts rather than through the agency of the dean or intern committee. Dr. Dock points out that assumption of responsibility for placing its graduates or fifth year students by the school incurs an obligation to those hospitals which benevolently accept candidates who rank among the lowest in their class. Having recommended such a man in the fall of his final year, the faculty would scarcely dare to flunk him in June. A fortiori, medical schools should not make the internship a part of their requirement for a degree."

During 1939-1940 there were 1,145 women studying medicine in the United States, constituting 5.4 per cent of the student enrolment. There were 253 graduates, seven less than in 1939. Eighteen were graduated from the Woman's Medical College of Pennsylvania, while 235 secured their degrees from coeducational schools. In the years since 1925, 3,521 women have graduated in medicine. Statistics compiled by the American Medical Directory revealed that there were 7,470 women physicians in the United States.

"Of the 6,005 students selected for the freshman class for the session 1935-1936," the report says, "it is interesting to note that 736 failed or for other reasons did not undertake sophomore studies and further that 1,019 had dropped out by the end of the second medical year.

"While 214 fewer freshmen were enrolled in 1937-1938 than in 1935-1936, there were also 149 fewer students who had discontinued their course by the end of the second year."

As to the number of American citizens studying medicine in faculties of medicine abroad, the report points out that "in the spring of 1939, according to incomplete official reports, there were at least 500 at that time in Europe, studying principally in the extramural medical schools of Scotland. Completion of the professional education of these students was interrupted by the decision of the State Department to discontinue visas of passports to combat areas. Many of these applied to American schools for either advanced credit or admission to the entering class of 1939-1940, with little success. The medical schools of the United States already have many more applicants for admission than they can possibly admit and at the time these students were seeking entrance the classes had already been filled to capacity."

The report points out that at a conference in March 1940 the State Department agreed that for the present at least it would issue visas for Switzerland for the students who wish to continue their studies in that country. It was estimated that about 100 of the group will avail themselves of this possibility.

"With the movement of events in Europe in recent months," the Council says, "it is quite evident that it will be impossible for students from this country to obtain a medical education in Europe in the near future."

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*NOTE:—References on Sulfocyanate in Hypertension.

(1) Nichols, J. B. "The Pharmacologic and Therapeutic properties of the Sulphocyanates," Am. J. M. Sc. 170:735 Nov. 1925.

(2) Gager, L. T. "The Incidence and Management of Hypertension," J. Am. Med. Assn. 90:82 Jan. 14, 1928.

(3) Smith, A. G. and Rudolf, R. D., "The Use of Sulphocyanate of Soda in High Blood Pressure," Can. Med. Assn. J. 19:288 Sept. 1928.

(4) A. M. A. J. ab-616, Aug. 12, 1939.

(5) A. M. A. J. ab-525, Feb. 10, 1940.

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been neglected by organized medicine and other directly interested agencies is shown by the Council's report that for 1939-1940 forty-one states and the District of Columbia provided a form of continuation study for physicians and, when clinical conferences were included, forty-four states and the District of Columbia offered graduate opportunities.

"Forty-one itinerant courses of continuation study for practicing physicians were offered in or near the home communities of physicians in thirty-one states," the Council reports. "State medical societies sponsored the majority, with state boards of health as well as extension divisions of universities and medical schools as joint sponsors in many states.

"According to reports received, the approximate attendance at courses of an itinerant nature, clinical courses and graduate assemblies totaled 52,012. The individual registration of these groups in the order named was 20,213, 15,399 and 16,400."

That opportunities for continuation study for Negro physicians are not being neglected is evidenced by the fact that ten states and the District of Columbia offered courses for Negro physicians. Attendance ranged from eleven to 204, the median being thirty-two.

Another aspect of the opportunities for continuation study is shown in the report that a total of 208 organizations held scientific sessions of value to practicing physicians during 1939-1940. Not the least of these was the scientific program of the American Medical Association.

The Council's report also contains a detailed list of the 732 hospitals approved by it for training interns. These instiutions have a total of 6,791 internships with a capacity of 244,257 beds. In addition there are listed the 587 hospitals with approved residencies and fellowships. The residencies total 4,392 and the fellowships 726.

Census Bureau Makes Fatal Accident Report

In a statistical study of fatal accidents in the six years 1933 to 1938 recently released by the U. S. Bureau of the Census, the report is shown that in 1933 fatalities from accidents totaled 90,932 and thereafter the number increased to a high point of 110,052 in 1936. Then it decreased to 93,805 in 1938.

Special emphasis was placed on deaths caused by fires, which ranked seventh among all accidental causes from 1933 to 1938 and advanced to sixth place in 1938. Figures for the years in succession were 1,521 in 1933, 1,752 in 1934, 1,581 in 1935, 1,913 in 1936, 1,688 in 1937 and 1,650 in 1938. Fire claimed more victims in the age group 5 to 9 than in any other group in 1938; there were 129 deaths in this group, which was 7.8 per cent of all persons burned to death. The next largest number was in the group 50 to 54, with 109 deaths.

Age distributions for different types of fatal accidents vary greatly, the report showed. Only 18.3 per cent of deaths from injury by fall occurred among persons under 45 years of age, who constitute 77 per cent of the population; but 55.8 per cent of the automobile fatalities and 91.3 per cent of the air transportation accidents were in this younger group.

Anesthesiology Board Increases Fees

Because of increased administrative expenses, it has been necessary to increase the application and administrative fees of the American Board of Anesthesiology, it has been announced. The new fees are $25 with application and $50 before examination. In case of rejection, all fees paid will be refunded except a $10 filing fee (before full examination).

The new fees go into effect January 1, 1941. If application is filed before that time, the rate of $50 ($5 for registration, not returnable, and $45 examination fee) still applies, according to Dr. Paul M. Wood, 745 Fifth Avenue, room 1503, New York, secretary.

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SIMPLE DIETARY METHOD OF TREATING INFANTS' DIARRHEA REPORTED

A simple and highly nutritious dietary method of treating diarrhea of the newborn infant with pectin-agar, which also is adaptable for home use in treating older infants and children, is described by Philip J. Howard, M.D., Detroit, and Charles A. Tompkins, M.D., Omaha, in The Journal of the American Medical Association. The beneficial results of such treatment of seventy-three children are reported.

Pectin is the congealing or jellying carbohydrate substance of apple sugar, and agar is an indigestible solidifying gelatin-like carbohydrate found in milk sugar, certain seaweeds, beet sugar and some gums.

Pectin-agar is added to the child's formula. It is made by cooking a soluble prepared powder in milk or other suitable liquid. The composite action of this high carbohydrate food results in an easily digested, nutritious food which mechanically produces formed stools, favors normal intestinal action, absorbs bacteria with their toxins (poison wastes), systemically combats acidosis, protein destruction and water loss, chemically combines with certain bacterial toxins and body wastes, and locally promotes healing.

"The treatment of diarrhea at any age," the authors explain, "consisting of limiting all intake to the pectin-agar formula and water until the stools are formed. The result is good whether large or small amounts are taken, the bulk of the stool depending on the intake. The older infants and children are allowed as much of the food as desired. After the bowel movements are free from blood, pus and mucus and are formed, the best practice with nurslings is gradually to replace the pectin-agar calories by calories from milk and added carbohydrate."

In discussing the results of the pectin-agar treatment of twenty-three newborn infants Drs. Howard and Tompkins state: "All infants treated had soft stools within forty-eight hours. The number of days until all liquid stools become soft and normal appearing was 4.7 with standard feedings as contrasted with 1.6 days with pectin-agar.

"Approximately fifty infants and children with bacillary dysentery (an infectious diarrhea caused by certain bacteria) and other types of diarrhea have been treated in the home with gratifying results."

Bloodletting For Hemophiliac Patients

Bloodletting from a vein (venesection) kept a hemophiliac patient or hereditary bleeder free of symptoms for seven years, George B. Lawson, M.D., Roanoke, Va., and A. B. Graybeal, M.D., Marion, Va., report in a recent issue of The Journal of the Ameciran Medical Association.

The patient was completely incapacitated because of joint symptoms (pain and swelling), nervousness and apprehension that occurred with the bleeding. Venesection, about once every six weeks, at the onset of symptoms kept the patient rather well for the seven years, except for discomfort in one knee. An x-ray of this knee showed cysts in the region of the knee cap and thigh bone.

The patient died about seven and a half years after the first venesection. The cause of death was reported as being due to "massive hemorrhage below the chin and contributory cerebral swelling brought about by an abnormal collection of fluid."

Pan American Tuberculosis Congress Set

The Fifth Pan American Congress on Tuberculosis will be held under the auspices of the Latin American Union of Tuberculosis Societies in Buenos Aires, October 13-15, and in Cordoba, October 16-17.

Official subjects for discussion will be the tuberculosis index of South American countries, heredity and contagion in tuberculosis, and the lungs in extrathoracic forms of tuberculosis. Each member nation of the union will have an official speaker on each subject.

SULFANILAMIDE USED IN TREATING HEART INFLAMMATION CASE

What he terms a "cure" and not a remission of a proved case of subacute bacterial endocarditis (inflammation of the membrane lining the heart) which was treated with sulfanilamide is reported in The Journal of the American Medical Association by Jacob Heyman, M.D., Newark, N. J.

In view of the fact that the disease is almost invariably fatal, and since attempts at specific treatment have thus far proved discouraging, a description of this case is warranted, Dr. Heyman believes.

The patient had suffered for quite some time, had lost 40 pounds of weight and complained of headaches, fever, lassitude, severe pains, difficult and labored breathing and sweating accompanied by chills. Streptococcus viridans, the green-producing organism, was isolated in the blood. Blood transfusion in addition to the usual treatment was of no avail. The patient left the hospital against advice but soon after recalled her physician, Dr. Heyman, and was put on small doses of sulfanilamide, which were continued for six months with steady improvement.

In attempting to establish the case as a cure Dr. Heyman explains: "Although remissions of varying degree occur in subacute bacterial endocarditis, a review of the case here reported would serve to demonstrate that this represents a cure rather than a remission. The striking change in a patient weighing 63 pounds, who now weighs 109 pounds and has been free from symptoms and fever for fifteen months, speaks against the possibility of a remission.

"Qualified observers have expressed discouragement over the use of sulfanilamide in subacute bacterial endocarditis. Such extreme pessimism seems premature, since the possible schemes of treatment with this group of chemicals have not all been exhausted.

"Cases of spontaneous recovery have been reported. The favorable response of this patient to sulfanilamide may have been merely coincidental. Yet, if this is attributed to coincidence, it leaves unexplained the recurrence of fever and symptoms when sulfanilamide was apparently discontinued too soon and their disappearance when the drug was resumed.

"The treatment of subacute bacterial endocarditis with sulfanilamide or its derivatives should not be hastily abandoned if results are not immediate; on the contrary, it should be continued persistently so long as the drug is tolerated."

Some Nerve Diseases Are Merely Symptoms

Some diseases of the outer sensory nerves resulting in such conditions as abnormal sensations are merely symptoms of more basic disorders affecting the blood vessels supplying the involved nerves, J. L. Fetterman, M.D., and D. K. Spitler, M.D., Cleveland, state in a recent issue of The Journal of the American Medical Association.

Some of these basic conditions are due to injuries following drug injections, blood clots in a vein, hardening of the arteries, diabetes, gangrene of a vein or artery, changes in the arteries brought about by syphilis, and inflammatory disorders of the arteries. All of them may reduce the supply of blood to the affected nerves and result in such nerve symptoms as burning sensations of the skin, shooting pains, excruciating muscular pains, areas of numbness or oversensitivity, and paralysis or weakness of the involved part of the body.

The authors point out that the local symptoms in each case depend on the nerve involved, the extent to which the disease has altered the involved site and the general status of the individual.

In view of this the two men declare that treatment should be directed toward eradicating the original disorder as well as providing relief of the local symptoms produced by the involved nerves.

ABSTRACTS : REVIEWS : COMMENTS and CORRESPONDENCE

SURGERY AND GYNECOLOGY

Abstracts, Reviews and Comments From
LeRoy Long Clinic
714 Medical Arts Building, Oklahoma City

"The Function of the Vertebral Veins and Their Role In the Spread of Metastases." By Oscar V. Batson, M.A., M.D.,; Philadelphia, Pennsylvania; Annals of Surgery, July 1940, Volume 112, No. 1, Page 138.

There are many metastatic tumors and abscesses that do not fit readily into the accepted explanations for tumor spread. The absence of lung involvement has been a constant stumbling block to current theories. Even an open foramen ovale has been used to explain metastatic paradoxes.

A certain peculiar distribution of bone lesions in the pelvis are pathognomonic of carcinoma of the prostate, and yet an adequate explanation for this typical and peculiar distribution of bone lesions has not yet been made. The pattern is not that of nerve sheaths or of lymph vessel distribution. The only anatomic system into which the pattern fits is the system of veins which invests the sacrum, the lumbar spine, and wings of the ilia.

Dr. Batson has done some ingenious experiments on cadavers and living monkeys to demonstrate the architecture of this plexus of veins.

By injecting the dorsal vein of the penis of a cadaver with a radiopaque material and followng the course of the fluid under the fluoroscope he was surprised to find that none of the material reached the inferior vena cava, but instead spread out in the veins in and about the sacrum. Further injection caused the material to progress up the spine and into the cranial cavity. Many intercostal veins were filled in the process. This specimen furnished a composite picture of the metastatic pattern of advanced cases of carcinomatosis with primary origin in the prostate.

The experimentation was next carried over to live monkeys with similar results, when pressure was applied to the abdomen to stimulate conditions of increased intra-abdominal pressure such as produced by coughing, sneezing or straining.

Breast tumors also give rise to paradoxic metastases, so a small vein of the breast of a female cadaver was injected with the radiopaque fluid. The material was found in the clavicle, intercostal vein, head of the humerus, cervical vertebrae, and in the cranium. These injections parallel the spread of the so-called aberrant metastases from the breast.

In another female cadaver, an injection was made in a vein just lateral to the areola. The first 15 cc. of material spread entirely into the adjacent subcutaneous tissue. The skin surrounding the site of injection flushed and the flush gradually extended past the midline. Only after the injection of 15 cc. did the fluid pass into the intercostal and vertebral veins. This would indicate that Handley's lymphatic permeation theory, even as it concerns the skin, might be restudied with profit. Possibly both lymphatic and venules are concerned in tumor spread in skin.

Dr. Batson proposes that in addition to the recognized system of veins, the pulmonary, the caval and the portal, because of its anatomic structure, its physiologic and its pathologic importance, we add, as a fourth, the vertebral system of veins. According to this concept, in every act of straining, coughing, or lifting with the upper extremity, the blood is not only prevented from entering the thoracico-abdominal cavity, it is actually squeezed out of the cavity. Tumors and abscesses of the thoracico-abdominal wall, including the breast, tumors of the lung, pelvic tumors and abscesses, lesions of the shoulder and pelvic girdle, and occasionally tumors and abscesses of other organs have connections with this vein system and may therefore, have metastases distributed anywhere along the system without involving the portal, the pulmonary or the caval system.

This contribution, made by a very able and ingenious anatomist, offers a logical and plausible explanation for the presence of metastatic lesions that we have all seen but have had difficulty in understanding.

We feel that Dr. Batson will long be remembered for this very original explanation for the spread of tumors.

Warren Poole.

"Cholecystojejunostomy As Opposed To Cholecystoduodenostomy or Cholecystogastrostomy." By Frank H. Lahey, M.D., F.A.C.S., Boston, Massachusetts; Surgery Gynecology and Obstetrics, Volume 71, Number 1, July, 1940, Page 73.

In this article the distinguished author advocates cholecystojejunostomy, rather than cholecystoduodenostomy or cholecystogastrostomy, when it seems advisable to provide a new exit for the bile in the case of a patient who has an obstruction of the lower end of the common duct resulting from such pathology as neoplasm of the head of the pancreas. The author says, "Some years ago, in patients with obstructive jaundice due to carcinoma of the head of the pancreas or at the ampulla of Vater, I began the practice of anastomosing the gall bladder to the jejunum which was brought up over the colon at the hepatic flexure instead of performing cholecystogastrostomy or cholecystoduodenostomy. This procedure has now been employed in a sufficient number of cases and over a sufficiently long period of time not only by myself but by the other surgeons in the clinic so that it may safely be presented as a method of sidetracking the bile from above the duct obstructed by malignancy into the intestinal tract. It is, at least in our hands, an operation which is easier to perform and one which is safer from the point of view of leakage than is anastomosis of the gall bladder to the stomach or anastomosis of the gall bladder to the duodenum."

Attention is directed to "an undesirable disproportion in the character of the thin-walled distended gall bladder and the thick-walled stomach with its heavy mucous rugae at that portion of the stomach just proximal to the pylorus." There is a statement, which is a representation of the experience of surgeons generally, that when an anastomosis is done between gall bladder and stomach the stomach tolerates the bile very well. However, there is a reference to the observation made at operation upon patients later that sometimes gastric contents were found in the gall bladder, and even in the contiguous ducts.

It is indicated that an objection to anastomosing the gall bladder to the duodenum is that there may be leakage, "because of its technical difficulties." This difficulty is understood when one contemplates the making of a water tight connection between the gall bladder and the duodenum, the explanation being that the duodenum is, practically, a fixed structure, while the gall bladder and the adjacent liver to which it is attached are movable structures. This difficulty becomes enhanced when there is vomiting after the operation.

But the author indicates an additional and greater difficulty when, because of a "deeply situated duodenum and with an overhanging right lobe of the liver," there is difficulty in properly placing the anastomotic sutures.

In support of his thesis, the statement is made, "If the jejunum is anastomosed to the gall bladder in place of either the stomach or duodenum, all of the disadvantages mentioned are largely avoided." The following statement indicates the technique: "With a long loop of jejunum pulled up in front of the colon at the hepatic flexure and the distended gall bladder emptied of its bile by a suction trocar, the two lax viscera can be dealt with at the level of the abdominal wall and a very accurate suture line completed around the opening in the gall bladder and the jejunum. Following the anastomosis the attached jejunum may be so rotated that the back as well as the front suture line may be inspected and reinforced if there is any evidence of sutures cutting out in friable gall bladders."

It is advised that, after the anastomosis is completed, a separate stitch be passed through a point just outside the fundus of the anastomosed gall bladder where the peritoneal coat of the gall bladder spreads out over the under surface of the liver. This stitch, then, catches the jejunum just beyond the point where that structure is anastomosed to the gall bladder.

It is advised that a similar suture be placed on the opposite side between the jejunum and this fold of peritoneum "where it passes off the gall-bladder wall." By this maneuver the jejunum is fixed to the liver and all tension on the suture line by the weight of the antecolic jejunum is removed. The jejunum being fixed to the liver by these two suspension sutures it ascends and descends freely with that structure.

Finally, the author reports that they have had several patients with carcinoma of the head of the pancreas alive two and three years following the operation above described.

LeRoy Long, Sr.

"Appendicitis Among Individuals More Than Sixty Years of Age." By Leonard K. Stalker, M.D., Rochester, Minnesota;—Surgery Gynecology and Obstetrics—July, 1940, Volume 71, Number 1, Page 54.

The author begins this very important article by the statement, "The greatest mortality for acute appendicitis occurs in patients more than 60 years of age," and it is indicated that it is the conclusion of the author that the mortality in this group of patients may be attributed to the fact that the diagnosis is frequently overlooked or delayed because of the patient's age and because of the mildness and variability of the symptoms.

Attention is directed to the frequency of appendicitis in this age group, the statement being made that approximately one to two per cent of all patients with acute appendicitis are more than 60 years of age. Statistics are presented to support this statement.

A question of the most vital importance is the mortality in this age group, which appears to be around 25 per cent.

The average pathological picture has been described by Taylor, of the London Hospital, as follows: "The almost constant course of acute appendicitis in old people is therefore — the first day, engorgement; second day, gangrene and local peritonitis; third day, perforation with general peritonitis or abscess formation; fourth day and after, abscess." The author remarks, "This is the pathological picture as described by others and as seen at the Mayo Clinic." At the same time, he directs attention to the statements of most writers that the clinical picture in this age group, at the beginning, is atypical, and he indicates that one of the most atypical characteristics in the early period of appendicitis in the patient over 60 years of age is "mildness of symptoms."

Taylor (London Hospital) is again quoted to the effect that "In the majority of the 110 patients seen by Taylor in whom appendectomy was performed, the appendix was gangrenous and peritonitis was frequently present. Abscess formation had taken place in a large group and only drainage was instituted." In another series to which the author refers, 55 per cent had appendiceal abscesses, 9 per cent general peritonitis, and 16 per cent gangrenous appendicitis.

The author discusses the cases of 82 patients observed in the Mayo Clinic from 1924 through 1938. There were 33 women and 49 men. The average age was 65.1 years. These 82 patients were treated by operation. In 51 out of the 82 there were ruptures of the appendix. In these patients with rupture the operation consisted in simple drainage, but in the remaining 31 out of the 82 where there were no evidences of rupture an appendectomy was performed in each case. A little later on in the article the author says that in 5 of the 51 patients with rupture of the appendix there was conservative, non-operative treatment. That statement was made quite definitely in discussing the treatment, but, for the moment, I overlooked it.

In the entire series of 82 patients there were 13 deaths, being a mortality percentage of 15.9 per cent. Nine of the deaths occurred in the series in which the appendix was ruptured, 8 being due to general peritonitis and one to pneumonia. Five of the 9 deaths occurred in that group in which appendectomy had been performed, and there were two deaths in each of the other two groups—"namely, those having simple drainage and those receiving conservative, non-operative treatment. In the series of 31 cases without rupture there were four deaths of which two were due to pneumonia, one to cardiac failure, and one to pulmonary embolism."

Where operation was done, about half had spinal anesthesia, and about half general gas—ether anesthesia. It did not appear that the type of anesthetic had any influence on the mortality rate.

"The pathological picture in relation to the time element is interesting in these two groups. In the 31 cases in which the appendix was unruptured there were 17 cases with gangrenous appendix while the 14 remaining showed varying degrees of acute purulent appendicitis. Of this entire group there were 20 cases in which the disease was of less than 24 hours' duration, 8 cases of less than 48 hours' duration. The history was considered atypical in 20 of the 31 cases of this group."

"In the series of 51 cases in which the appendix was ruptured there were only 17 cases in which the disease was of 48 hours' duration or less. In several instances it had been present several days to even a few weeks before the first examination at the clinic. There were 29 patients with general peritonitis, 11 with abscess formation, seven with gangrenous appendix and some degree of localizing peritonitis, and four in whose cases the pathological condition was not described. The history in at least 30 of these 51 cases in this group can be considered as atypical."

One of the most important observations was that the clinical syndrome of acute appendicitis in all the patients in this group was entirely different from that of those in younger individuals. At least 50 of the patients presented atypical symptomalogy when compared with the ordinary textbook description of acute appendicitis. In this large group of cases there was an absence of the ordinary sequence of symptoms and signs, such as initial epigastric distress, then pain in the lower right quadrant, nausea, vomiting, etc. The conclusion of the author is that the ordinary clinical syndrome may be present in the case of the elderly patient, "but it occurs sufficiently infrequently that it might be called the atypical picture of acute appendicitis in patients more than 60 years of age."

"In these patients, as has been mentioned, a characteristic attack of appendicitis may develop, but there seems more likely to be lower abdominal pain with localization over McBurney's point, leucocytosis, but frequently no fever, nausea, or vomiting. These findings may be all that is present for two or three days, or even

a week, before more toxic symptoms develop. The more severe symptoms which then appear are usually those of either localized or diffuse peritonitis."

"In the majority of instances the patient has a rather mild cramp-like, intermittent type of general lower abdominal pain. This is associated with a mild indescribable dyspepsia and constipation. The pain is usually considered as being due to constipation and a cathartic or an enema is taken. This pain tends to localize in the right lower quadrant of the abdomen and tenderness develops over McBurney's point. If a leucocyte count is made it is found to be elevated to between 9,000 and 15,000 in each cubic millimeter of blood. Occasionally the pain begins as a dull ache at McBurney's point and remains localized. Anorexia and, in a few instances, some degree of nausea are present. There is usually no vomiting, but occasionally the patient vomits once or twice in the early phases. However, this has subsided completely by the time the patient is seen. There is very little, if any, constitutional disturbance and the amount of pyrexia, if any is present, is small."

As the symptoms progress, there may be cramp-like pains which become more and more severe, and at the same time there may be distention. The symptomatology develops in such an insidious way that, taking into consideration the age of the patient, there may be a provisional diagnosis of intestinal obstruction due to malignancy of the colon.

"Thus, early in appendicitis in this age group there develops a lower abdominal cramp-like pain with localization at McBurney's point, tenderness in this region, and leucocytosis. In spite of the fact that within the next 48 hours the appendix usually becomes gangrenous and subsequently ruptures, the symptoms are still not acute enough for the patients to seek medical aid. Thus the majority of our patients had peritonitis and it was because of the symptoms of this peritonitis that they sought aid. As the appendix becomes gangrenous and peritonitis develops the picture resembling intestinal obstruction becomes even more apparent and frequently when patients are admitted at this phase, much valuable time has been lost in an attempt to locate a suspected neoplasm. As peritonitis devolops, more symptoms of toxicity manifest themselves and the patient may have considerable vomiting and fever. However, other patients remain ambulatory throughout the entire course of their illness and come because a mass has developed in the right lower quadrant of the abdomen. This mass has usually proved to be an abscess."

In connection with this important article there are a number of enlightening case reports but they will not be repeated here.

The treatment of this type of appendicitis in the aged is approached with care and circumspection, and in this connection the author makes a very lucid and valuable statement: "It must be said in this regard that elderly people seem to be able to make one effort to limit the peritonitis by adhesions, but if these are broken down the pus will spread, even though the source of infection is removed."

Comments: In analyzing this article, I have taken the liberty to make several verbatim quotations. These quotations are made because they are regarded as being valuable.

The average general surgeon who approaches his work with a proper conception of the responsibilities involved has known for a long time that appendicitis in the aged, as far as the early symptomatology is concerned, is distinctly different from that in younger patients. However, I am afraid that this conception of the situation is not generally known and practiced.

The author does not take the position that patients should not have the advantage of surgical operation. On the other hand, he indicates in a very distinct way that under proper circumstances operation should be done. After a careful reading of the article one is impressed with the value of wise discrimination, based upon knowledge, wisdom and good judgment.

LeRoy Long, Sr.

EYE, EAR, NOSE AND THROAT

Edited by Marvin D. Henley, M. D.
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"The Biochemistry of the Lens: A Resume." James E. Lebensohn, M.D., Ph.D., Chicago. The American Journal of Ophthalmology, July, 1940.

This is an attempt to sift, summarize and interpret the significant data concerning the chemistry of the crystalline lens. The author again reminds us that the lens consists roughly of one-third protein and two-thirds water. The lens depends entirely on the aqueous for its metabolic interchange. The specific gravity of the lens slowly increases (1.113 at the age of 90). With age there is also an increase of protein and lipid with a proportional loss of water. The lens capsule and experimental cataract are discussed.

The author's therapeutic conclusions are as follows: Misconceptions in the medical management of cataract readily arise from overattention to secondary details. If the primary failure in senile cataract is in the glycolytic mechanism, it avails not to shift the acid-base balance of the diet, nor to administer cysteine, calcium, or potassium. Vitamin depletion must also be classed among incidental manifestations since cataract is not a characteristic accompaniment of xerophthalmia, beriberi, pellagra, or scurvy. Prophylaxis holds a far brighter prospect than cure. The picture of lamellar cataract illustrates that though this complication of rickets with tetany can be arrested by vitamin D and dietic adjustment the treatment cannot erase whatever cellular degeneration has occurred.

In treating incipient cataract, some physicians endeavor to improve the nutrition of the lens by increasing the permeability of the blood-aqueous barrier through various irritants applied by instillation or by subconjunctival injection. The value of such therapy is theoretically questionable since the metabolic capacity of the lens is limited and the increased permeability withdraws cevitamic acid from the lens and so lessens its reduction power.

The majority of cataracts are of systemic origin, but one eye is often affected while the companion eye is still healthy. If that lens could be kept transparent, the patient would be well content. "One eye is a necessity, two eyes a luxury." It is an encouraging thought that any medicament that can enter the aqueous will diffuse into the lens. The lens could be treated, if we only understood what to use. This we do know, that lental health like mental health depends on the state of the body. "Lens sana in corpore sano." With our present insight what more can be done than improve the patient's general health, remove focal infections, and correct dietetic and hygienic errors?

"The Treatment of Corneal Ulcers." Mason Baird, M.D., and Grady E. Clay, M.D. Atlanta, Georgia. The Southern Medical Journal, April, 1940.

There are three sources of corneal infection mentioned, i. e.; (1) trauma or foreign bodies, that is, exogenous, (2) systemic or endogenous, and (3) by spread from adjacent ocular tissues. The cornea is very resistant to bacterial invasion, it being thought that only gonococcus and diphtheria are capable of penetration and ulceration. Introduction of bacteria by means of trauma is classical of the exogenous class; the spread of disease from adjacent ocular tissues is well shown with phlyctenular and superficial keratitis; the tubercle is representative of the endogenous group. There is a discussion given as to the clinical progress of the ulceration.

The author feels that many ulcers are overtreated, that more damage is done in this manner than by undertreatment. Where the continuity of the surface of the cornea is broken, as in corneal ulcers or any type of keratitis, a pad should be used for protection, removing as necessary

for cleansing and medication. Under general treatment the teeth seem to be the greatest offenders. However all possible foci of infection should be checked including tonsils, sinuses, intestinal tract, etc. The author uses some form of foreign protein in all cases. He has noted startling results in cases of kerato-conjunctivitis from the use of Vitamin A alone with no other local treatment than saline irrigations and a pad. The author has not had the good results claimed by others with sulfanilamide except in ophthalmia neonatorum. In these cases the duration is cut to about seven days. In addtion to the sulfanilamide he uses five per cent mercurochrome three times daily and cleansing as necessary. In the author's experience of the past six years he feels that x-ray is the most valuable single item in the treatment of all bacterially infected corneal ulcers. Periodic checks with the slit lamp have failed to reveal any lenticular change. 80 to 100 r of unfiltered x-ray, given at about 8 inches distance, at intervals of three to five days, for a total of four to six treatments, seem to prove most effective. The relief of the pain is often dramatic.

The author reports six cases of the relatively rare filamentary keratitis. Pathologically this is quite similar to xerophthalmia. Oral use of Vitamin A is effective.

Superficial punctate keratitis is treated with atropine, early padding, and sometimes alcohol and iodine. Vitamin A is also given orally. The dendritic ulcer is the herpes simplex of the cornea. He mentions one case where the entire corneal epithelium was removed and the alcoholic iodine solution applied four times and the eye healing wthout a nebula.

Phlyctenular kerato-conjunctivitis, usually a disease of childhood, is treated locally and generally. A diet high in protein and low in carbohydrate with some 30,000 units of Vitamin A daily is recommended. Calomel powder and atropine locally are effective. Two or three doses of x-ray will relieve the photophobia and blepharospasm.

The pneumococcic ulcer is one of the most serious. The author claims his most spectacular results with the x-ray in this type of infection. Atropine, cleansing and padding are used in addition.

Rosacea keratitis or kerato-conjunctivitis is treated by taking care of the facial lesions; if there is active ulceration, atropine, cleansing and pad are used. This is continued until there is no staining. If the lids are much thickened, the Meibomian secretions are expressed and 1 per cent silver nitrate applied occasionally. X-ray is also used. 40,000 units of Vitamin A are given daily for six to eight weeks.

An interesting discussion of the paper by several leading authorities is appended.

"Sympathetic Ophthalmia." Rodman Irvine, M. D. Los Angeles. Archives of Ophthalmology, July, 1940.

This is a clinical review of sixty-three cases recorded at the Massachusetts Eye and Ear Infirmary between the years of 1922 and 1935. It is an interesting and instructive recapitulation that does not lend itself well to abstracting. Several page length detail tables are enclosed in the report. The method of closure of the wound to possibly prevent subsequent sympathetic ophthalmia is as follows: Closure of the scleral or corneal edges with interrupted sutures, using 0.0025 black silk (Deknatel) and a 10 mm. Kalt corneal one-half circle needle; the attempt is made to make intracorneal or intrascleral sutures but no harm is done if the sutures are placed through and through. The author does not consider the closure satisfactory unless the anterior chamber can be filled with air after tying of the sutures. The air helps to prevent the formation of anterior synechiae.

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The author's own conclusions and summary is as follows:

In this series there is no instance of sympathetic ophthalmia developing without perforation of the globe.

If enucleation is to prevent the development of sympathetic uveitis, it must be done before two weeks have elapsed from the time of injury. Once sympathetic uveitis has developed, enucleation of the exciting eye has no effect on the course of the disease, and this eye should be retained, if potentially useful, as it may eventually be the better eye. From the available data there is no indication that the exciting eye acts as a focus of infection "spilling over" into the sympathizing eye.

Considering the frequency of the occurrence of sympathetic ophthalmia, one per cent of all perforating injuries, attempts to save severely damaged eyes, especially if the lens is injured, are not justified if the fellow eye is normal. A distinct possibility of sympathetic uveitis must be considered when operation is contemplated on eyes nearly blind from any cause, as for instance, hemorrhagic glaucoma.

"The progression of symptoms in the course of the disease may be of diagnostic importance: (a) The exciting eye is always irritable at the onset of symptoms in the sympathzing eye. (b) Keratic precipitates are nearly always present in the sympathizing eye and make their appearance in this eye before they appear in the exciting eye. Uveitis developing about six weeks after injury or operation to the fellow eye, showing at the onset no keratic precipitates, has about a 10:1 probability of not being sympathetic uveitis.

The wounds exciting sympathetic uveitis, whether traumatic or operative, characteristically show incarcerated lens substance or uveal tissue. This fact and the incidence of the condition after various types of operations suggest that iris inclusion operations are more likely to cause complications with sympathetic uveitis than trephine operations; they further suggest that repair of perforating injuries should include freeing the wound of incarcerated substance and firmly uniting the tunica fibrosa.

CARDIOLOGY

Edited by F. Redding Hood, M. D.
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"Examination of the Heart."—American Heart Association.

The following article is the second part of a pamphlet published by the American Heart Association under the direction of Howard B. Sprague, M.D., with the assistance of Harold E. B. Pardee, M.D., Samuel B. Scholz, M.D., and Harry E. Ungerleider, M.D.

CARDIAC MURMURS

As in the appraisal of heart sounds, so in the study of heart murmurs, the examination is best started at the base of the heart. Here, usually, the second sound can be placed with great accuracy, and the timing of murmurs elsewhere can be decided by gradually moving the stethoscope toward the apex. The absence of murmurs in the heart should be decided only after listening to all the valve regions with the naked ear and with both the bell and the diaphragm chest piece of the stethoscope. The characteristics of these instruments are such that the bell may fail to transmit satisfactorily the high-pitched blowing murmurs, and the diaphragm, the low-pitched murmurs.

SYSTOLIC MURMURS

Murmurs occurring during systole are, without doubt, more difficult to assess than those occurring in diastole. It is of great importance to determine the point of maximal intensity of such murmurs because this is one way by which we can decide upon their relative importance. Since the most common murmur to be heard in the heart is the systolic murmur over the pulmonary valve area in the second interspace to the left of the sternum, it is well to listen in this area first to see whether or not a systolic murmur is present. This murmur may be transmitted to other parts of the precordium. It is usually a normal physiological phenomenon caused by the blood rushing into the distensible pulmonary artery which is in relatively close apposition to the chest wall, particularly at expiration. This murmur will change considerably with change of position of the patient from upright to recumbent and will be decreased and often completely removed by full inspiration. Such a murmur, as a solitary finding in the heart, is almost always of no importance, and yet it is often wrongly regarded with suspicion.

Another extremely common systolic murmur, heard over the precordium, is the cardio-respiratory murmur. This is due to air rushing into the lungs at the time when the heart contracts, or to displacement of air within the lung. This murmur also varies considerably with change of position and with respiratory phases. A useful method of deciding about this murmur is to have the patient breathe slowly and deeply in and out. At some point in the respiratory cycle, the murmur will often disappear completely. This point is not necessarily in either full inspiration or expiration but often at an intermediate position.

Systolic murmurs at the apex of the heart are not uncommon, as a normal phenomenon, in young patients. However, before such murmurs can be considered unimportant, it must be shown that they are of a blowing quality, that they are not associated with cardiac enlargement, and that they are not constant from day to day and with different positions of the patient. Most of the innocent apical systolic murmurs, except those found during the course of acute infection, are either cardio-respiratory or are transmitted from the pulmonary region.

Acute infections or other causes of ill health may temporarily produce apical systolic murmurs, probably by inducing slight cardiac dilation and increasing the speed of the blood flow. As it has been shown by sound tracings that certain usually inaudible vibrations are often present over the heart when the blood is ejected from the ventricles, it is not surprising that faint systolic murmurs can, at times, be heard in over-active normal hearts. They are variable in their localization from one examination to another, sometimes being apical, at other times heard over the whole precordium; they are sometimes localized to the left of the sternum, or to its lower portion. They are short and never harsh and may be mid-systolic in time.

Systolic murmurs of importance at the apex generally merge with the first heart sound and are rougher and more intense than the murmurs which have been mentioned. They usually signify mitral valve deformity but may be produced by other disease mechanisms. Systolic murmurs over the pulmonary valve region, if attended by a thrill, should be carefully studied. They are often associated with cyanosis and are due in such cases to a congenital heart lesion. Such murmurs indicate further study by X-ray and electrocardiographic techniques. Systolic murmurs over the aortic area should also be carefully considered. They are rarely physiological and usually mean dilation of the aorta or stenosis of the aortic valve. In the latter case there is diminution or absence of the aortic second sound and usually a systolic thrill. This can be felt best by palpating over the second and third right interspace, or above the clavicle, or in the suprasternal notch with the patient leaning forward at full expiration. A rare systolic murmur, which is sometimes heard all over the heart but loudest in the third left interspace, is the one associated with an interventricular septal defect. This is a very coarse murmur associated with a systolic thrill.

DIASTOLIC MURMURS

There are two diastolic murmurs of great importance.

One is the low-pitched, rumbling, mid and late diastolic murmur of mitral stenosis. It is heard best at the apex with the bell stethoscope and the patient in the recumbent or left lateral recumbent position. It is often sharply localized and careful auscultation of the entire apical region should be carried out before deciding that this murmur is not present. Accentuation of the first heart sound should always make us suspicious of the possibility of finding this murmur. In the early stages of mitral valve narrowing, the murmur starts a short time after the second sound and ceases shortly before the first sound. In older patients, the murmur usually continues, with a presystolic accentuation, into a sharp first sound.

The other murmur is a blowing early diastolic murmur usually heard best along the left sternal border directly after the second sound by the unaided ear or with the aid of the diaphragm type of chest piece. This aortic diastolic murmur is usually best heard with the patient leaning slightly forward, in the erect position, holding the breath in full expiration. When the aortic regurgitation is greater, as is common in syphilitic aortic valve disease, this murmur may be very loud and heard with the patient in any position and all over the chest.

CONTINUOUS MURMURS

The only important continuous murmur is that of patency of the ductus arteriosus. It is heard with greatest intensity over the second or third left interspaces near the sternum and is usually accompanied by a thrill. The systolic phase is louder but the murmur continues through the whole cardiac cycle with a blowing or harsh quality.

In some children a continuous humming murmur can be heard across the upper sternum due to the normal vibrations from the flow of blood in the great veins of the neck. The bell stethoscope lightly applied over the clavicle, with the child's head turned away from that side, will reveal a louder continuous hum in these cases and will thus locate the origin of the murmur heard distantly in the upper chest.

CARDIAC RHYTHMS

Cardiac Rhythms Not Usually Indicating Disease

The heart rate and rhythm in normal people often departs from the theoretical regular beating at a rate of 70-80. The commonest variations are these:

Tachycardia—Simple acceleration of the heart rate is often found during examination of nervous individuals. It may be as fast as 160. The rate may slow gradually as nervousness decreases, or when the person lies down. It often slows temporarily on forced expiration after a deep breath.

Bradycardia—A slow heart rate as low as fifty is not uncommonly found in normal athletic people. It should not be considered as evidence of cardiac disease. Increase of the rate on exercise will prove that heart block is not present, as will speeding of the rate on inspiration and slowing on expiration.

Sinus Arrhythmia—This irregularity is the customary finding in young people and often in older age periods. It consists of a rhythmic increase in heart rate on inspiration and decrease on expiration. This relationship to breathing is diagnostic and can be demonstrated more obviously by slow forced respiration.

Premature Beats (Extrasystoles) — When a regular heart rhythm, or one with the irregularity just described, is momentarily interrupted by an early beat followed by a pause, a premature contraction (extrasystole) has occurred. In most instances this is of no importance. The diagnosis of the condition should always be made by auscultation of the heart and not by taking the pulse. Frequent recurrence of the premature beat indicates the need for electro-cardiographic study, as this should arouse a suspicion of myocardial disease.

IMPORTANT DISTURBANCES OF THE HEART BEAT

Arrhythmias of serious importance are auricular fibrillation and heart block.

Auricular Fibrillation—This arrhythmia is marked by a heart beat which is continuously and completely irregular. It does not change its rate in relation to breathing nor is it a temporary interruption of a regular rhythm. The heart should be listened to for at least a minute because periods of apparent regularity may occur. Auricular fibrillation always calls for further study of the patient.

Heart Block—This is a rare arrhythmia. In its mildest form, diagnosable on physical examination, it is characterized by sudden cessation of all cardiac sounds for the duration of at least one heart cycle. It must always be diagnosed at the heart and not at the wrist. It should not be confused with a faint premature beat followed by a pause. Electrocardiographic study may be needed to confirm the diagnosis. When complete heart block is present, the heart rate is found to be between 30 and 40 in most cases. The rhythm is regular and normal acceleration on effort does not occur. Rates under 50 should be investigated electro-cardiographically.

QUESTIONABLE CARDIAC RHYTHMS

Other abnormal rhythms of the heart, usually characterized by continuously rapid rate (over 120) or by paroxysms of tachycardia, often require electrocardiographic interpretation and should be so investigated.

Examination of the heart is never complete without a general physical examination. Much valuable information concerning the functional state of the heart can be obtained by attention to other organs. Thus it should be an invariable procedure to listen for rales at the lung bases and to look for engorgement of the neck veins, enlargement of the liver, and evidences of edema. Careful determination of the blood pressure should also be routinely carried out, preferably in both arms. In addition, observation should be made of the peripheral vessels, and of the retinal vessels with the ophthalmoscope.

Finally, it must be recognized that severe organic heart disease may exist in the complete absence of any findings on physical examination. This is particularly true in coronary artery disease. Therefore, when a cardiac lesion is suspected and physical examination is inconclusive, further study with special techniques, such as fluoroscopy, X-ray and electrocardiography is advisable before a final decision is made as to the presence or absence of organic heart disease, and the type and severity of lesion present.

INTERNAL MEDICINE

Edited by Hugh Jeter, M. D., F. A. C. P., A. S. C. P.
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"General Consideration of the Relationship of Hypertension to Renal Disease." N. M. Keith.

"Urographic Evidence of Renal Lesions in a Series of Patients Suffering From Essential Hypertension." R. O. Pearman, G. J. Thompson and E. V. Allen.

"The Relationship of Hypertension to Renal Neoplasm." B. T. Horton.

"Hypertension and Chronic Atrophic Pyelonephritis." N. W. Barker and Waltman Walters.

"Hypertension and the Surgical Kidney." W. F. Braasch, Waltman Walters and H. J. Hammer. Proceedings of the Staff Meetings of the Mayo Clinic, Wednesday, July 24, 1940, Volume 15, No. 30.

This is an extremely interesting and instructive discussion of this most important problem. Dr. Keith in his introductory remarks, relative to general consideration of the relationship of hypertension to renal disease, points out certain historical high lights and admits that those and present information are such that the field for further investigation of the subject is a very fertile one. He also states that there are many pathological and physiological causes for ear-

diovascular renal disease and infers that primary kidney lesion may be the cause in a comparatively small percentage.

In the discussion of urographic evidences of renal lesions, R. O. Pearman found that in 500 cases of hypertension in which urographic studies were carried out there was evidence of renal disease in 205, or two-fifths of the cases, but comments to the effect that the co-existence of renal disease and hypertension does not indicate that the former condition necessarily causes the latter.

In connection with the relationship of hypertension to renal neoplasm by B. T. Horton, an interesting case is recited and the author comments that the presence of hypernephroma in hypertension with disappearance of the hypertension after removal of the tumor, and a recurrence of the hypertension with recurrence of the tumor certainly suggests a casual relationship. In his series of 325 cases of hypernephroma, 40 per cent of the men and 55 per cent of the women had hypertension. Of 57 patients who had hypertension, records obtained for 25 after nephrectomy showed that 11 had normal blood pressure and 14 still had hypertension. Therefore, no consistent alteration in the blood pressure followed nephrectomy. In short, his study failed to substantiate observations of previous investigators to the effect that a marked fall of hypertension followed removal of hypernephroma.

In the study of hypertension and chronic atrophic pyelonephritis N. W. Barker in a very short discussion emphasized the fact that among the large group of patients (12,000 cases) who had been at the Clinic with definite hypertension, the co-existence of definite chronic atrophic pyelonephritis is not common.

W. F. Braasch from the section of Urology, Waltman Walters of Surgery, and H. J. Hammer in Urology make several extremely interesting observations which briefly follow:

The incidence of hypertension in a group of 1,684 patients subjected to renal surgical operation was no higher than it was in a group of patients taken at random.

Hypertension was observed in 20.3 per cent of 793 cases operated for renal stone.

Hypertension was noted in approximately 14 per cent of cases of hydronephrosis without stone.

Hypertension was observed in 7.6 per cent of the 158 cases of renal tuberculosis.

Hypertension was found in 27.7 per cent of 137 cases operated for renal adenocarcinoma.

Many cases studied whose renal function was reduced had no hypertension.

Back pressure as a result of renal stasis usually is not a factor in hypertension unless acute bilateral obstruction is present.

The following concluding paragraph is to me a very significant one:

"Reduction in blood pressure may exist as long as a year or more after operation and yet hypertension may return. This can be explained on the ground that a toxic or irritant lesion has been eliminated and, when this influence has worn off, the underlying essential hypertension reasserts itself. In order to determine whether recovery after operation is permanent it is necessary to determine the patient's blood pressure for more than a year."

UROLOGY

Edited by D. W. Branham, M. D.
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"The Effect of Hormones On The Undescended Testis." J. S. Eisenstaedt, M.D. Max Appel, M.D. and Max Fraenkel, M.D. Chicago. American Medical Journal. July, 1940.

The authors' interest was first aroused when they operated on thirteen patients who had failed to respond to injections of anterior pituitary-like substance given by their physicians. The presence of fibrotic adhesions, the small size of the gland and other significant changes suggested to them that definite harm had been produced by administration of the hormone substances.

For the past two years they have been making clinical observations and performing clinical experimentation to see whether the use of such hormone preparation is actually of therapeutic value.

Their conclusions were: That careful evaluation of the position of the abnormally situated testes, which can be determined by painstaking examination, is necessary. The group of abnormally situated testes which will descend when they reach or approach adult size and weight are to be differentiated clinically from the group of true undescended and ectopic testes. True undescended and ectopic testes always require operative treatment for their correction. Retractile testes may descend spontaneously as late as the seventeenth year.

Gonadotropic substance has no value in the preoperative care of true undescended and ectopic testes. Its routine use in retractile testes is not recommended. Gonadotropic substance is definitely harmful in larger dosage to testes which have not reached the scrotum.

Operation was done in a series of seven clinical cases showing marked evidence of degeneration after the use of hormone. The surgical correction of the undescended testis after endocrine therapy is not facilitated, as claimed by others, but is rendered more difficult.

Comment: The indiscriminate use of gonadotropic substance in the treatment of undescended testicle is undoubtedly to be condemned. This is a significant article from individuals of wide experience. It is my opinion that such preparations are a "two edge sword" and their promiscuous administration in developing children may produce serious degenerative changes which only years will manifest itself as distressing disabilities of these structures.

"Observations Upon the Site of Action of Sulfapyridine In Gonorrhea." Reed M. Nesbit, M.D. Journal of Urology. August, 1940.

This is an interesting observation in view of the controversal discussion as to the exact mode of action of these preparations.

A patient whom two years previously had had his urine sidetracked by means of a bilateral ureterosigmoidostomy developed a gonococcal infection complicated by epididymitis. Despite the fact that no urine passed through the lower urinary tract the administration of sulfapyridine was followed by excellent results. The inference was that sulfapyridine produced its cure from tissue concentration rather than from the effects of its presence in the urine.

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